

MAY-JUNE 2011

ARMY SUSTAINMENT

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Tips From Sustainment
Brigade Commanders

SUSTAINMENT BRIGADE MEDICAL OPERATIONS



The 307th BSB and
Iraqi Army Logistics
Expanding Logistics Capacity
Sustainment Lessons Learned
From Combined Joint Task Force-82

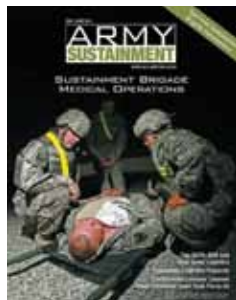
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Cover: Health service support and force health protection have become important aspects of sustainment. The articles beginning on pages 6, 10, 13, and 36, look at the activities of brigade support medical companies, a sustainment brigade's brigade surgeon section, and the U.S. Army Medical Materiel Center, Korea. Force health protection seeks to improve Soldier health, casualty prevention, and casualty care. Often the first care that wounded Soldiers receive is from fellow Soldiers on the battlefield who have received combat lifesaver training. In the cover photo, Soldiers from the 1st Sustainment Brigade provide medical aid during the hands-on portion of the Combat Lifesaver Course. (Photo by SSG Matthew Veasley)



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Using Knowledge Networks to Learn, Act, and Adapt

BY MAJOR GENERAL JAMES L. HODGE

Since beginning my tenure as commander of the Army Combined Arms Support Command (CASCOM), I have been impressed by the commitment of our professionals to remain on the leading edge of knowledge management in support of our Soldiers and leaders alike. It takes a network of dedicated and highly capable professionals to envision, build and enhance, and communicate the information required to maintain the best training, education, and ultimately, “reachback” opportunities for our sustainment community.

We perform this mission in the context of the Army Operating Concept, which outlines four key trends in the current and future operating environment: uncertainty, pace of change, competitiveness, and decentralization. These trends require us to produce leaders with a high degree of operational adaptability—critical thinkers who are comfortable with ambiguity and decentralization and capable of making rapid decisions under conditions of uncertainty and change.

To this end, CASCOM is implementing the principles of the Army Leader Development Strategy, the Army Training Strategy, and the Army Learning Concept by launching initiatives designed to achieve a blended, career-long continuum of learning. These efforts adopt a learner-centric approach, built on the pillars of training, education, and experience, with a focus on optimizing multifaceted learning capabilities within institutional, organizational, and self-development domains.

The intent is to increase the quality, relevance, and effectiveness of resident training and education by expanding learning opportunities both within and beyond the “brick and mortar” schoolhouse, delivering learning to the point of need—wherever that might be—while simultaneously leveraging the experiential learning of Soldiers, civilians, and leaders throughout the force.

The key to realizing the full value of this ubiquitous learning environment is to harness the collaborative power of the Sustainment Knowledge Network (SKN) in order to stimulate, enable, and sustain adaptability and innovation within our Soldiers, civilians, and leaders, within our training development and delivery systems, and within our organizational culture.

SKN is an enterprise knowledge management and collaboration platform that links all aspects of the CASCOM mission across the full spectrum of the Army’s operational construct and provides the means to rapidly produce, share, and respond to the critical knowledge needs of our Soldiers whenever and wherever needed. As stated by General Martin E. Dempsey, the commanding general of the Army Training and Doctrine Command (TRADOC), “Knowledge management is a tool that will enable us to more effectively deal with uncertainty and the rapid pace of change . . . to prevail in the competitive learning

environment and ultimately adapt more quickly than our adversaries.”

Through its global reach, SKN is a learning enabler within our training, education, and leader development process that coincides with the preferences of digital-age learners entering the Army. With this in mind, CASCOM is already achieving major milestones, and while the following examples are only a part of CASCOM’s overarching knowledge management strategy, they are clearly best practices within both TRADOC and the Army.

Of the 449,000 Active and Reserve component Soldiers, Department of the Army civilians, and supporting contractors who make up the global Army sustainment community, over 113,000 are registered in SKN professional forums. They generate approximately 14,500 “knowledge transactions” a week—learning from each other every day by sharing expertise and experience, Soldier to Soldier, staff to staff, and between organizations.

The CASCOM staff is actively engaged in leading, contributing, and responding to questions and discussions generated in these forums. Sustainment Center of Excellence schools are implementing strategies to ensure initial military training Soldiers are introduced to SKN as a reachback to their proponent branches, and professional military education (PME) students are actively using SKN’s capabilities in the classroom to collaborate and learn with their peers in the operational force.

The CASCOM Directorate of Lessons Learned/Quality Assurance routinely uses the SKN Warfighters’ Forum to broadcast and share the observations, best practices, and lessons learned raised by leaders returning from operational deployments. This provides a means to rapidly share, discuss, and expand upon topics important to all within the Sustainment community.

Efforts are underway to extend SKN products and services to tablets, smart phones, and other mobile devices, to include providing reliable enterprise access to mobile applications being produced by our CASCOM Training Technology Division and other Army organizations participating in the Connect Soldiers to Digital Applications (CSDA) program.

CASCOM commands the Army’s Sustainment Center of Excellence—a premier team of committed and innovative professionals on whom I rely to actively use and enhance SKN capabilities to better prepare and support sustainment Soldiers, civilians, and leaders in the 21st century. Optimizing our sustainment intellectual capital is a team sport, our sustainment warfighters depend on it, and I look forward to sharing your future success stories with leaders throughout the Army. Support Starts Here!

MAJOR GENERAL JAMES L. HODGE IS THE COMMANDING GENERAL OF THE ARMY COMBINED ARMS SUPPORT COMMAND AND SUSTAINMENT CENTER OF EXCELLENCE AT FORT LEE, VIRGINIA.

Tips From Sustainment Brigade Commanders

BY LIEUTENANT GENERAL MITCHELL H. STEVENSON
(AND SEVERAL FORMER SUSTAINMENT BRIGADE COMMANDERS!)

What makes a successful sustainment brigade commander? The Army's Deputy Chief of Staff, G-4, asked commanders with experience in Iraq and Afghanistan for their insights.

Some of you may recall the article I penned in the September–October 2007 issue of *Army Logistician* entitled “Thoughts for Sustainment Brigade Commanders.” Now that many of our Active and Reserve component sustainment brigades have deployed to Iraq or Afghanistan (and performed brilliantly, I might add), I thought it would be useful to ask: What has made them so successful? What leadership skills helped when, like clockwork, they enabled the drawdown of nearly 100,000 combat troops and their equipment out of Iraq last year and when we added 60,000 more troops in Afghanistan over the past 2 years? And what leadership strategies are they now employing to be successful?

So, I asked them. And here's what they told me, providing very sage advice to those who command sustainment brigades. With their tremendous amount of theater experience, they *know* what works. You'll see a fair amount of similarity to what I wrote 3 ½ years ago, but that's OK—it just validates that we are on the right track!

Pre-Deployment

Colonel Ed Daly (43d Sustainment Brigade): “We started our training approach in garrison. Our ‘train to fight’ and ‘fight to be relevant’ approach paid huge dividends when deployed. NCOs [noncommissioned officers], officers, and Soldiers understood the importance of using every opportunity to engage with support units and leverage our capabilities across the battlespace.

“This approach taught the staff that intelligence drives operations and operations dictate sustainment. We had to understand what was occurring operationally in order to make the right adjustments to our concept of support. It was also important to meet and train with all supported units, when possible, in order to begin building relationships even before deployment.”

Colonel Michael Peterman (101st Sustainment Brigade): “The 101st Sustainment Brigade was very lucky to deploy with the division from our home station. We were provided an opportunity, as we prepared for deployment, to leverage training dollars and academics

from the higher headquarters. When not deploying with a division headquarters you are stationed with and support in garrison, it is critical that additional TDY [temporary duty] dollars be allocated to allow participation in the various train-up exercises and culminating training events for these supported headquarters.”

Engagement

Colonel Mark Barbosa (7th Sustainment Brigade): “My focus in going to BSB [brigade support battalion] commanders was to see how they were holding up and then focus on where I needed to enable him or her. We would go over their concept of support for any upcoming major operation or just the general support we were providing. I was able to pick up on a lot of things you just don't get in a report or an email. Since we were tied in closely with the G-4/G-2, we knew where to inject ourselves.

“The monthly division commander's conferences were a great time to engage with the brigade combat team commanders outside of their forward operating bases. We were so tied in with the division and their BSBs [that] they thought we were part of the division. I believe none saw the sustainment brigade as an encroachment to their authority; we enjoyed unrestricted, routine access and dialog, and vice versa.”

Colonel Daly: “We developed an engagement plan to ensure we were supporting as well as shaping, influencing, synchronizing, teaching, and coaching. Overall, there were 67 different organizations—tactical to strategic—that we were engaging on a regular basis. Routine battlefield circulation and engagements were key.

“We took every opportunity to meet with all strategic partners—AMC [Army Materiel Command], ASC [Army Sustainment Command], DLA [Defense Logistics Agency], ASA (ALT) [Assistant Secretary of the Army (Acquisition, Logistics, and Technology)], SDDC [Military Surface Deployment and Distribution Command], DCMA [Defense Contract Management Agency], LOGCAP [Logistics Civil Augmentation Program]—so these organizations knew our requirements and where they could assist.



The 43d Sustainment Brigade and Regional Command South conduct a sustainment rehearsal of concept (ROC) drill in Kandahar, Afghanistan.

“I personally attended regional commanders’ conferences and briefed weekly as I wanted the senior battlespace leadership to know that I understood the operational commander’s intent, my commander’s critical information requirements (CCIR) were nested with the regional commanders, and my staff and I had a good understanding and visualization of future operations and upcoming decision points.”

Nesting

Brigadier General Andre Piggee (15th Sustainment Brigade): “Work to be part of your supported division commander’s daily battle rhythm; participate in the division’s daily commander’s update with quick, hard-hitting log actions and solutions. Collaborate daily with the division’s G-4, and convince the deputy commanding general that you are his senior log adviser for all log issues regardless of who’s responsible for the action. I would check in with my deputy commanding general every day either in person, by phone (preferred), or email. I would invite the division commander to visit my units and ask him to participate in ceremonies. Let him know your units are part of his team.”

Brigadier General Steve Lyons (82d Sustainment Brigade): “This is all about effects—ensuring everything we do in the logistics community is aligned with the desired campaign outcome of winning. This often requires thinking out of the box. The best logisticians understand operations—sometimes better than operators. We’ve come an incredibly long way in this regard.

“It is paramount [that] the sustainment brigade align its battle rhythm to the decision cycle of the supported commander. In addition to being ‘on the net,’ it is equally important to be ‘inside the wire’ with the liaison officer network. It is important [that] liaison officers inside of division headquarters be active planners in shaping outcomes. This affords sustainment brigades the ability to anticipate and link the supported commander’s intent with the reality of the physics of logistics. It also provides important top-cover and leadtime for Soldiers and company-level leaders who actually execute tasks on the battlefield.”

Colonel Barbosa: “The command sergeant major and I circulated the battlefield constantly. It gave us a chance to sit down with the brigade combat team commander and the brigade support battalion commander. It also allowed us to engage with our folks who were on the road, operating from a forward base or the mayor/installation staff we supported.

“We embedded liaison officers in the brigade support battalion staff or in a forward operating base when a brigade combat team wasn’t there. Many times, we supported more than the brigade combat team on the same forward operating base. We also placed a small team of liaison officers with the division G-4, and in every case they proved they were worth their weight in gold. This always kept us two steps ahead of any issue and focused our battlefield circulation visits.”

Brigadier General Gus Perna (4th Sustainment Brigade): “Besides developing strong relationships with the deputy commanding generals you support, I recommend you make an effort to get inside the chief of staff’s routine. Walk the division hallways weekly. Also, make sure your staff understands the [division] G-4 and staff have free access to your headquarters. They have to know you are always available to brainstorm, assist, or just talk.”

Brigadier General Darrell Williams (3d Sustainment Brigade): “The sustainment brigade must be the biggest team player on the battlefield, and getting the job done is all about positive relationships and building trust up, down, and laterally. There can be no light between the sustainment brigade, supported brigades, supported brigade support battalions, supported aviation support battalions, the division G-4/G-1, and the sustainment command you work for.

“Every plan the division G-3/G-4/G-1 even thinks about developing based upon the division commander’s

guidance must automatically include the supporting sustainment brigade. If that doesn't happen, you're already too late.

"The engineer section is among the most critical enablers on the sustainment brigade staff, especially in active IED [improvised explosive device] areas. The sustainment brigade engineer's relationship with the sector division engineers, engineer brigade, and local route clearance teams is literally a lifesaver. The relationship is vital to sector-wide support and keeping convoys protected and moving.

"Also ensure your supported units know that you are responsible for human resource and finance support functions. Many of them still don't know they can come to the sustainment brigade for help in these areas. Have good CCIR in place for these functions, and treat them just as important as you do other sustainment functions."

Colonel Daly: "Our staff attended over 75 meetings each week—a high price, but well worth the investment to drive sustainment and demonstrate that we were team players. We developed a nested sustainment action plan with 5 lines of effort/operation and 93 sustainment measures of effectiveness."

Colonel Peterman: "The importance of nesting with your higher headquarters is essential. Building relationships with these units, being tied into training events, and knowing how the commander and his staff operate will allow the sustainment brigade the ability to be proactive with providing the anticipated support, understanding their missions, as well as leveraging the capabilities they bring to the fight. The regional command has ownership of the assets and combat multipliers necessary for a sustainment brigade's success.

"Relationships with battlespace owners ensure that when our Soldiers require assistance, we're able to go to the source directly and conduct coordination for the required assets. For example, we cover multiple battlespaces delivering commodities but have zero organic intel assets. Once a convoy leaves a forward operating base, they're in someone else's battlespace."

Brigadier General Lyons: "There is no substitution for battlefield circulation. It is imperative to develop or reinforce networks, enable battlefield visualization, and facilitate early-on problem identification and resolution."

Mentoring

Colonel Barbosa: "Our nightly reports to the expeditionary sustainment command were concise but thorough. We shared these with our organic combat sustainment support battalion and all of the brigade support battalions. I believe it gave the commanders a broad look at the logistics preparations going on in and out of the division's sector. Many of the commanders then adopted our format as their own, sharing with us

what they were sharing with their commanders."

Brigadier General Williams: "Continue to mentor brigade and aviation support battalion commanders. You must be available for oversight, personal and professional counsel, and advice. Reach out and have a direct relationship with each brigade combat team. They must know they can call you personally any time, day or night, and get results. Support operations officers work out 90 percent of the critical support issues, but often in crucial, time-compressed situations, and sometimes commanders want to speak to a fellow commander."

Brigadier General Perna: "Go visit your supported brigade support battalions. Many don't know what they need or what capacity you bring. You don't have to own them to influence them. Have the CSSBs [combat sustainment support battalions], BSBs, and AFSBns [Army field support battalions] conduct capability tours with each other, and together they will figure out how to fill seams and gaps."

Final Tip

Brigadier General Lyons: "Doing more is not always better. The most important decisions you make are what you are willing not to do in order to ensure limited resources are allocated to the most important tasks."

Well, there you have it—some really valuable advice from commanders who have been there and done that. Due to space constraints, I did not include all that these former commanders sent me, but all of what they sent is available from the Army Combined Arms Support Command's (CASCOS) Directorate of Lessons Learned and Quality Assurance.

And I have a tip of my own. It has to do with supply support activity (SSA) management and oversight. Given the limited automated materiel management capability resident on the BSBs and CSSBs, the sustainment brigade really has to step forward and provide oversight—monitoring performance of the SSAs in the supported area of responsibility and enlisting the help of AMC's Expert Authorized Stockage List Review Team at the Logistics Support Activity (LOGSA) as required. I think if you talk to those who contributed the advice above, and any other successful sustainment brigade commander, they'd all tell you that they did this—it was just another key to their success.

I hope all of you out there who aspire to command our sustainment brigades save this article and refer back to it from time to time. If you have tips to add, please send them in to CASCOS so others can learn from your experience! Army Logistics—Always There, Always Ready!

LIEUTENANT GENERAL MITCHELL H. STEVENSON IS THE DEPUTY CHIEF OF STAFF, G-4, DEPARTMENT OF THE ARMY.

Using a Brigade Support Medical Company on the Current Battlefield

BY CAPTAIN CARLA A. BERGER

A brigade support medical company deployed to Afghanistan found that flexibility was the key to providing support to a widely dispersed force.

With the current use of forward surgical teams and combat support hospitals on the battlefield, where does the medical company of a brigade combat team fall into the operation plan? The brigade support medical company (BSMC) is more robust than a role 1 facility, but it is not able to provide as many services as a role 3 facility. [Role 1 is unit-level first medical care. Role 3 is the level of care provided by a combat support hospital.] In essence, the BSMC is “the middle child,” who always seems to get “left out.” So where does the BSMC fall in the spectrum of Army medical support?

Officers are taught the correct way to conduct support operations as set in doctrine. In the current war on terrorism, however, doctrine has to be used as a starting point for what a unit does. The key is for a unit to maintain flexibility.

BSMCs have been used for different missions throughout the 9 years of Operation Enduring Freedom. They have been used to run detainee holding facilities and

This photo shows the inside of the initial C Company first aid station at Kandahar Airfield.

The aid station was shared with the mayor's cell and had only one exam room, but the medics were able to support over 5,000 Soldiers assigned to the brigade.

provide forward operating base (FOB) security and FOB details, and they have been broken up into smaller pieces and tasked to perform as organic role 1 facilities. These are all ways to carry out the mission. But when C Company, 402d Brigade Support Battalion (BSB), deployed to Afghanistan with the 5th Stryker Brigade Combat Team, 2d Infantry Division, from Joint Base Lewis-McChord, Washington, it found that the BSMC is stronger as a whole than when it is broken into separate pieces.

Operating in Two Locations

After C Company arrived in an undeveloped theater in Afghanistan, it set up a first-aid station in a 10-by-12-foot building with one exam room. This was a temporary solution that provided medical care to over 5,000 Soldiers for 30 days.



The company was then split between two main locations. Evacuation teams from the company pushed out to the role 1 facilities to increase coverage and also to bring female medic support to each infantry battalion.

Half of the company was stationed with the BSB tactical operations center (TOC) and the brigade TOC. This aid station had between 20 and 30 Soldiers at any given time. Along with the combat medics and one medical provider, the physical therapist, the dental team, the preventive medicine team, the brigade medical support officer, the patient administrative technician, and the company supply section, the Soldiers built their new home from ground up. They supported over 800 Soldiers stationed at this location and provided care to Soldiers passing through from the front lines. This section provided care to over 3,000 Soldiers, which was more than any other aid station within the brigade's area of operation.

Along with providing care on a daily basis, the Soldiers at this location were assigned to provide medical care on all BSB logistics convoys to outlying FOBs. The teams were made up of three medics: one senior medic as the tank commander (who sits as a passenger in the front seat and acts as the leader of the vehicle), one driver, and one dismounted medic (who can exit the vehicle to provide care at a moment's notice). With two to three convoy missions per week, the aid station was often left with only four medics to attend to sick call patients.

To make the best use of his skills, the only physical therapist assigned to the BSMC would spend a week at a FOB, travel back to the aid station to refit and provide care, and then head to a new location. He was able to hit each location, on average, every 6 weeks. The need for physical therapy was so great at some locations that he would often be pushed out to a combat outpost (COP)

A medic cares for a wounded Soldier after an indirect hit on a forward operating base.



where he would see up to 20 new patients within a 24-hour period. To provide continuous care, his physical therapy technician, a cross-trained Soldier in military occupational specialty 68W (healthcare specialist), would stay at the aid station to make sure that all patients received the highest level of care.

The personnel of the preventive medicine section also spent most of their deployment on the road visiting each major FOB monthly. They also traveled to each COP to make sure all Soldiers were living and working in healthy conditions. Not only did they provide care to American Soldiers; they were often used to provide SWEAT [sewer, water, electricity, academics, and trash] assessments in local villages and Afghan National Army compounds.

Because of the large amount of dental equipment, its lack of mobility, and its requirements for power, the dental team was permanently assigned to the aid station. During the last 6 months of the deployment, the team did begin to travel, with limited tools, to provide class IV exams for Soldiers and obtain a clearer picture of how many Soldiers would be redeploying as class III. [Under Department of Defense dental fitness classifications, a class IV Soldier is nondeployable if he has no dental examination recorded in the last 12 months. A class III Soldier can be deployed only if he receives treatment for conditions likely to cause a dental emergency within the next 12 months.]

Only one patient administrative technician was responsible for tracking the entire brigade's wounded in action and killed in action personnel, so he became borrowed military manpower to the role 3 facility. He was on call 24 hours a day, 7 days a week, and he was called in to every medical evacuation (medevac) that involved a 5th Stryker Brigade Combat Team Soldier. All information that was gathered would be pushed to the brigade surgeon cell so it could be pushed to all commanders within the brigade.

Supporting Forward

The second half of the company was pushed to an outlying FOB so that the infantry elements could push their providers and medics to the outlining COPs. With x-ray, laboratory, patient holding, and combat stress treatment capabilities, this aid station provided care to more patients than all role 1 facilities combined.

Having the x-ray and laboratory capabilities closer to the fight enabled Soldiers to travel back to the FOB instead of having to travel back to the role 3 facility to receive treatment of minor injuries. This enabled Soldiers to stay in the fight.

The patient holding section made an important contribution to the forward fight. Being colocated with a combat stress team, the section was able to provide a watch for suicidal or depressed patients 24 hours a day,



Above, the inside of the aid station located by the brigade support battalion tactical operations center. Below, the environmental science officer collects water samples from a forward operating base to transfer for testing.





The dental team provides care to a patient. The team was mobile but could only provide limited services.

7 days a week. Without this capability, these Soldiers would have been evacuated to a higher level of care, taking them off the line for at least a week for travel time alone, not to mention the time needed for treatment.

To compensate for the limited capability of the combat stress team, the organic combat stress technician was mobile and could be at any location within 24 hours of an event. He would travel throughout the area of operations to ensure that all Soldiers' mental health needs were cared for on a daily basis in the highly stressful environment.

Being colocated with the aeromedevac capabilities increased communication between the two medical elements. Category B (urgent surgical) and category C (priority) patients could be flown straight to the role 2 facility and given care within minutes. [Role 2 is division-level care, adding dental, x-ray, laboratory, and patient-holding capabilities to role 1 care.] If the role 2 facility had not been located as far forward within the battlespace as it was, this capability would not have existed and all medevac patients would have had to be flown to a role 3 hospital, where they would have been the last to be seen because of the large number of category A (urgent) patients. In that situation, as soon as the patient was discharged, he would

have had to seek out his battalion liaison officer to arrange transportation back to the unit instead of being within driving distance of his company.

Even with running two aid stations, C Company was still flexible enough to support the entire brigade. This ranged from providing specialized providers and treatment teams at the role 1 facilities for battalion-level missions to providing female medic support as far forward as possible to provide care to wounded local females as well as female search capability.

Does the current make up of a BSMC support the battlefield? No. The doctrinal composition of an evacuation, treatment, and headquarters platoon does not support current operations. But having a command that enables the company to be flexible and agile provides a stronger medical element to support all Soldiers.

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Sustainment Brigade Medical Operations

BY MASTER SERGEANT GREGORY C. THORN

The brigade surgeon section is key in planning and implementing effective healthcare for a sustainment brigade. This was demonstrated by the 43d Sustainment Brigade's brigade surgeon section during its deployment to Afghanistan.

The 43d Sustainment Brigade had responsibility for the southern and western regions of Afghanistan, providing sustainment to support the surge of U.S. forces during Operation Enduring Freedom 09–11. The brigade surgeon and staff coordinated and synchronized medical operations in conjunction with the brigade's operational sustainment support plan. Coordination and support for the brigade's medical treatment facilities (MTFs) and medical support for the brigade's logistics convoys required networking before deploying to Afghanistan.

In preparation for setting up their consolidated role 1 aid station, 43d Sustainment Brigade medics inventory the medical platoon's medical equipment after downloading it from its containers.



Brigade Surgeon Section

The brigade surgeon is a special staff officer who reports directly to the brigade commander. The brigade surgeon's duties include coordinating with the next-higher command surgeon and the medical brigade commanders for Army Health System support of sustainment brigade health service support (HSS) and force health protection (FHP).

While preparing to deploy to Afghanistan, much of the brigade surgeon section (BSS) work consisted of developing and coordinating Army Health System support by initiating network contacts with the sustainment units in Afghanistan that already had medical support. The BSS integrated medical support to synchronize with the 43d Sustainment Brigade operational support plan. The brigade's large area of responsibility

required much coordination to meet all of its needs for HSS and FHP in the southern half of Afghanistan.

Mission Preparation

Medical coordination and support from the already-in-place 575th Area Support Medical Company (ASMC), 30th Medical Command, and the later arriving 62d Medical Command began while the 43d Sustainment Brigade headquarters was still stateside. Determining the current levels of care and medical evacuation assets available was essential to the surge of U.S. forces expected in the region.

Before deploying, the brigade surgeon and staff diligently worked to synchronize and integrate proper medical support within the brigade's operational support plan. Before the brigade's arrival in country, initial contact

was made with already-in-place units to coordinate and plan the brigade's required HSS and FHP needs for its expansive role in southern and western Afghanistan.

During the brigade's first 60 days in Afghanistan, the primary concern was establishing the role 1 MTF while planning and coordinating the brigade's medical support. Doctrinal manning of sustainment brigades with medics and providers only supports the brigade headquarters element. The 43d Sustainment Brigade's sustainment expansion into southern and western Afghanistan meant the BSS needed additional medics to support the brigade's logistics convoys.

Upon arrival in Afghanistan, the brigade surgeon focused on patient management and treatment that required out-of-theater medical evaluations and treatments. Processing authorizations for aeromedevacs and medevacs through the patient administration sergeant efficiently moved patients for continued care. The BSS developed and coordinated an effective mass casualty (MASCAL) plan that complemented the base-wide emergency plan.

MTF Levels

Three levels of medical care are available in the southern half of Afghanistan. The levels use the North Atlantic Treaty Organization (NATO) designations referred to as "roles," which are different from the American College of Surgeons "levels" that are used by U.S. trauma centers. The military roles designate differences in capabilities and not the quality of care.

Medical capabilities increase with each role step; each higher role has the capabilities of the role below it in addition to expanded capabilities. The most forward role MTF possible works to return troops to duty after minor treatment for minor injuries or illnesses. Troops requiring expanded medical care are prepared and evacuated with en route medical care to the next higher role MTF to receive the more extensive treatment.

Role 1 MTF. Role 1 MTFs provide initial triage, medical treatment, and evacuation as needed. Staffing at the role 1 MTFs includes medics and either a field surgeon or a physician assistant. Role 1 MTFs are the first level of care provided by a doctor or physician assistant and offer initial life-saving treatment of casualties, primary disease prevention, nonbattle-injury prevention, and routine sick call healthcare. Role 1 MTFs have no patient-holding facilities.

Role 2 MTF. The southern and western Afghanistan role 2 MTFs continue basic and emergency treatment, including basic primary care. They provide an increased medical capability with the addition of x-ray, laboratory, combat operational stress control, and dental services and have limited inpatient bed space (approximately 20 to 40 cots) for holding patients up to 72 hours.

The 575th ASMC provided Kandahar Airfield with a U.S. Army role 2 MTF but without the patient holding because of its proximity to the Kandahar role 3 MTF.

Role 3 MTF. The 43d Sustainment Brigade headquarters, based on the large multinational NATO Kandahar Airfield, has an established NATO role 3 MTF. The Kandahar role 3 MTF provides the highest level of care within the theater and also has expanded inpatient capacity. It provides outpatient services or hospitalization for all types of in-theater patients, furnishing definitive medical care or stabilizing for medical evacuation out of the combat theater.

The Kandahar role 3 MTF has operating room tables for initial types of surgical services that include general, thoracic, orthopedic, neurosurgical, urologic, plus dental and oromaxillofacial (when the specialty provider is available), with post-operative care in intensive care units, intermediate care wards, and minimal care wards. A neuropsychiatric ward is also available. Additional laboratory, x-ray, blood bank, optometry, mortuary, and physical therapy services are available in the Kandahar role 3 MTF. The MTF also has an expanded behavioral health department. Incoming and outgoing patient evacuation transportation support is an additional feature, moving patients to and from the role 3 MTF.

Sustainment Brigade Medical Organization

Sustainment brigades are authorized a small medical platoon composed of a headquarters element, a treatment squad, and an ambulance squad. The headquarters element includes a field surgeon (who is also assigned as a treatment-squad provider) and a staff sergeant healthcare sergeant as the platoon sergeant. The treatment squad includes a physician assistant, two medical treatment sergeants, and five medics. The ambulance squad includes two ambulance medical sergeants and four medics.

The medical platoon is responsible for the brigade role 1 MTF, providing emergency trauma and routine medical treatment for the almost 300 personnel in the brigade headquarters and headquarters company (HHC) plus approximately 1,700 additional troops from the other subordinate sustainment brigade units within the HHC base operating area. Once it was set up, the MTF immediately started providing medical care, creating a combined aid station (CAS) with its surgeon periodically assisting the 43d Sustainment Brigade's field surgeon and physician assistant.

The 43d Sustainment Brigade provides all classes of supply to U.S. and NATO forces in southern and western Afghanistan. The BSS helps with acquiring additional medics and medical support for the logistics convoys because the brigade's medical platoon has only enough medics to support one MTF. The request for more medics brought augmentation from the Air Force with medics for convoy support. The Air Force medics also replaced Army medics at one base that the 575th ASMC

was supporting. Since the 575th ASMC was redeploying back to the United States, logistics convoys to one of the brigade's major logistics bases in southern and western Afghanistan would not have had medical coverage.

When the 575th ASMC withdrew from supporting the sustainment brigade units, the 43d Sustainment Brigade's medics began supporting the logistics convoys of one of its sustainment battalions. This reduced the number of medics available to support the brigade's role 1 CAS MTF, causing a reduction in the MTF's operating hours from its previous 24-hour schedule.

Setting Up Operations

Upon arrival in the 43d Sustainment Brigade area of responsibility, the brigade's primary concerns were establishing its role 1 MTF and coordinating the medical effort for the brigade troops. As the 43d Sustainment Brigade's Soldiers arrived at Kandahar, the brigade surgeon immediately began receiving patient care consults from brigade providers.

The BSS began coordinating and managing medical evacuation and treatment authorizations for individual troops to leave the theater by aeromedevac for more advanced tests or procedures unavailable in theater at the NATO role 3 MTF. Through the patient administration sergeant, the BSS tracked all brigade troops on aeromedevacs and on urgent but stable medevacs that left the theater until they returned to the theater or continued to the United States.

Once the brigade arrived in Afghanistan, the next step for the BSS was to develop the 43d Sustainment Brigade's MASCAL plan and coordinate it with the multinational, joint Kandahar Airfield MASCAL plan. The brigade's MASCAL plan implemented the identification of casualty collection areas and casualty collection points where medical supply boxes with litters are placed. The plan also identified the brigade's subordinate units' labor pool, communications, and security responsibilities—all of which depend on the location within the brigade's area of responsibility on Kandahar Airfield, where a MASCAL may occur.

Medical Sustainment

The BSS monitored and tracked medical operations within the brigade with the Medical Communications for Combat Casualty Care System and provided timely information to the brigade surgeon on medical capabilities and updated medical situational awareness on the health of the command. Armed with this information, the BSS worked with the MTFs under its responsibility to continue to improve the troops' HSS and FHP.

Within the brigade's first 60 days in Afghanistan, the brigade medical aid stations improved the brigade's required immunizations compliance by 23 percent; this improved the brigade's medical readiness by more than 12 percent. This coordination and management

of the class VIII (medical supplies) was made possible by working hand-in-hand with the brigade's medical logistics officer in the commodities management center. Ordered and shipped, the class VIII went to the battalions' role 1 CASs. From there, the providers and medics aggressively provided the needed vaccinations, tests, and profile management to keep the brigade's medical readiness at more than 95 percent during the deployment.

Medical training occurred in the theater, with the BSS coordinating with the Kandahar Airfield medical simulation training center to support the brigade's need for continued medic and combat lifesaver training. This helped the brigade's Soldiers and medics to remain well-trained and confident in their medical skills and abilities. The need for sustainment training developed because of the number of brigade logistics convoys traveling on dangerous, difficult, and limited roads in southern and western Afghanistan.

As the medical providers within the brigade redeployed, the BSS coordinated with other commands, including the U.S. Navy commands, to request replacements and ensure that they arrived. In the event that the replacement provider did not arrive until over a month after the first provider redeployed, a temporary provider covered the outlying role 1 aid station's provider shortage.

The brigade's role 1 CAS increased its capabilities and services by coordinating primary dental services. A dentist and dental assistant with their general field dental equipment colocated in the role 1 CAS to provide basic dental care and hygiene services. Consolidated check-in and prescription dispensing streamlined both dental and medical areas for both patient types.

The BSS tracked and monitored medical operations within the brigade and effectively managed medical supplies. The results were improved brigade compliance with immunization and medical readiness. Medical training was also conducted to maintain medics' and Soldiers' medical skills and confidence. Coordinating the replacements for redeploying medical providers helped maintain the outlying role 1 MTFs' medical capabilities. Additional dental care and services were also coordinated, expanding the brigade role 1 CAS capabilities. Medical analysis and flexibility within the BSS allowed the 43d Sustainment Brigade to sustain the buildup of U.S. forces in southern and western Afghanistan.

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Medical Logistics Operations on the Korean Peninsula During Key Resolve 2010

BY MAJOR WILLIAM TUDOR AND SARA SCHUBERT

One of the U.S. Army Medical Materiel Center, Korea's missions is to ensure the medical logistics readiness of U.S. Forces Korea for transition to hostilities. This capability was tested using four medical logistics scenarios.

Anyone who has been around the Army Medical Department has probably heard, "Have no fear; USAMMA [U.S. Army Medical Materiel Agency] will wave its magic wand and medical supplies will be there when you need them." However, as former Secretary of Defense Donald Rumsfeld said, "You go to war with the army you have, not the army you might want." During Key Resolve 2010 (KR10), the U.S. Army Medical Materiel Center, Korea (USAMMC-K) exercised four scenarios to ensure that the medical logistics the warfighters have in Korea is the medical logistics they want.

Reorganization in Korea

Supporting the warfighter in often austere and usually joint operations provides unique opportunities to shape medical logistics organizations for mission success. The most significant transformation within the last 3 years was the activation of USAMMC-K to replace the deactivated 16th Medical Logistics (MEDLOG) Battalion.

For 6 decades, a medical logistics organization at Camp Carroll, Korea, has supported the Korean peninsula and parts of the U.S. Pacific Command (PACOM) area of responsibility. In 2007, the 16th MEDLOG Battalion was slated for deactivation, creating a critical gap in medical logistics.

Over many months of intense discussions, collaborative efforts among PACOM; U.S. Forces Korea (USFK); the Office of the Surgeon General; the Defense Logistics Agency (DLA), which is the Executive Agent for Medical Materiel; the Army Medical Research and Materiel Command; the 18th Medical Command (now the 65th Medical Brigade); and the Army medical logistics community resulted in the establishment of USAMMC-K as a provisional organization. In October 2008, USAMMC-K assumed the missions of the 16th

MEDLOG Battalion and the Theater Lead Agent for Medical Materiel-Korea (TLAMM-K).

USAMMC-K was officially activated in October 2009. The organization is a direct reporting unit under the Army Medical Research and Materiel Command but is under the operational control of the 65th Medical Brigade, which was activated in October 2008 as a subordinate command of the Eighth U.S. Army.

During the same time period, another medical logistics transformation was occurring in Japan. In 2009, the Air Force's 18th Medical Group in Okinawa was designated

A U.S. Soldier, a ROK Soldier, and a Korean augmentee to the U.S. Army inventory medical supplies issued by USAMMC-K to a ROK hospital during exercise Key Resolve 2010.



as the Theater Lead Agent for Medical Materiel-PACOM (TLAMM-P). The unit began by supporting Okinawa-based units and achieved initial operating capability in October 2010. When TLAMM-P reaches full operational capability, it will be able to provide backup medical logistics support to TLAMM-K.

USAMMC-K is an amalgamated organization consisting of—

- ❑ USAMMC-K military personnel.
- ❑ USAMMC-K Department of the Army civilians.
- ❑ Borrowed military manpower from the Headquarters and Headquarters Company, 65th Medical Brigade, and the Headquarters and Headquarters Detachment, 168th Multifunctional Medical Battalion, and the 563d Medical Logistics Company.
- ❑ Korean Augmentee to U.S. Army soldiers.
- ❑ Korean national employees.
- ❑ Korean Service Corps personnel.
- ❑ A DLA planner.
- ❑ The 19th Sustainment Command (Expeditionary) liaison officer.

Despite the mix of personnel, USAMMC-K has jelled extremely well as a world-class organization, as was displayed during KR10.

Planning for KR10

In 2009, the USFK surgeon and 65th Medical Brigade commander informed the USAMMC-K commander of his intent to exercise medical logistics capabilities extensively during the upcoming exercise. Medical logistics officers throughout the peninsula developed four medical logistics scenarios designed to challenge the multiple echelons of medical logistics support required during a transition-to-hostilities operation. The scenarios exercised class VIII (medical materiel) electronic ordering and distribution in realistic situations.

The objectives were as follows:

- ❑ Assess medical supply electronic-ordering strengths and challenges.
- ❑ Validate the operational “in support of” relationship with the Republic of Korea (ROK) forces.
- ❑ Exercise the forward distribution team mission of USAMMC-K and the 563d Medical Logistics Company.
- ❑ Exercise the TLAMM-P in support of the TLAMM-K concept.
- ❑ Assess Defense Distribution Depot Korea (DDDK) support capabilities.

Scenario 1: Army-Centric Class VIII Support

The concept of the Army-centric operation was to provide class VIII to a task force with a medical company that became the class VIII supply support activity (SSA). The supported units then reconfigured their DMLSS (Defense Medical Logistics Standard Support)

Customer Assistance Module (DCAM) to submit orders to the SSA using a combat service support very small aperture terminal (CSS VSAT), and the SSA submitted the requirement to USAMMC-K using a CSS VSAT.

Multiple issues arose during the electronic ordering of medical supplies, preventing USAMMC-K from exercising the process fully. The supported units attended several training sessions conducted by Medical Communications for Combat Casualty Care and USAMMC-K personnel to help with reconfiguring their DCAM systems. Unfortunately, the DCAM reconfiguration could not be accomplished because of hardware, software, and network issues. The solution was for each unit to order separately, using DCAM over the existing local area network to USAMMC-K and the SSA's Department of Defense activity address code as a supplemental address for delivery to the SSA.

Movement of supplies began at USAMMC-K with the palletization and preparation for rotary-wing delivery of class VIII. The CH-47 Chinook helicopter picked up the cargo at Camp Carroll and moved the shipment to Area I. The delivery was made late that afternoon to a landing zone where a forward distribution team, consisting of 563d Medical Logistics Company and 560th Medical Company (Ground Ambulance) Soldiers, received the class VIII supplies. The team transported the supplies to the SSA and then separated the supplies for each customer.

The following day, part of the class VIII shipment received was slated to be moved by front-line ambulance backhaul to a supported unit. However, because of severe road conditions, this movement was delayed for several days until ice was cleared from the roads.

The success of this mission can be attributed in large part to the reconnaissance missions and planning of the 563d Medical Logistics Company forward distribution team and the 560th Medical Company. The 2d Combat Aviation Brigade flight crew also did an outstanding job of ensuring that the mission was completed despite delays caused by the weather.

Scenario 2: Combined Support to ROK Forces

The concept of this scenario was to provide emergency class VIII combined support to the ROK Army in order to support Korean hospital operations. ROK Army ground assets picked up class VIII at Camp Carroll and moved the supplies to a supported hospital.

The mutual logistics support agreement was used to authorize the transfer of supplies from USAMMC-K to the ROK Army. The supply request flowed from the ROK unit through the Combined Forces Coordination Center and the Joint Medical Operations Center to USAMMC-K. All communication was accomplished via email, telephone, and “click-to-meet” video teleconference.

Although all supplies were notional, each box was packed and marked as if it were the actual class VIII

materiel. The temperature-sensitive items were packed to standard, and a joint inventory was conducted of all items. This process, although very simple, had never been exercised as far back as anyone could recall. The scenario was a success because it was well executed and expanded the possibility for future scenarios.

A notable discovery was that the Republic of Korea and the United States use different catalog numbers to identify individual items. Both parties agreed to research corresponding catalog numbers for their 100 high-demand items to facilitate future ordering.

The ROK Army medical logistics community performed commendably in their coordinating efforts, which ensured mission success.

Scenario 3: TLAMM-P Support to TLAMM-K

In this scenario, the 18th Medical Group, based at Kadena Air Base in Okinawa, served as the TLAMM-P and supported the Joint Special Operations Task Force-Philippines and the III Marine Expeditionary Force. In this scenario, a Marine unit in Korea requested emergency resupply. USAMMC-K could not provide support with current stocks on hand; the TLAMM-P was able to support the requirement with its on-hand stock through an aeromedevac flight backhaul.

The Defense Supply Center Philadelphia medical logistics planner at USAMMC-K and the USAMMC-K support operations officer visited the 18th Medical Group in February 2010 to assist with a TLAMM-P planning conference. These relationships proved to be invaluable in executing the operation.

Because of systems incompatibility, the medical electronic ordering was accomplished by email. In order to effectively support future requirements, USAMMC-K must establish an account with the TLAMM-P once it reaches full operational capacity.

The class VIII shipment was flown from the TLAMM-P to Korea by fixed-wing aircraft from the 18th Medical Group in Okinawa and then transported to the port by 2d Combat Aviation Brigade rotary-wing assets. As the TLAMM-P has not reached full operational capability, the authorized medical allowance list containers used to simulate class VIII movement were empty. The 18th Medical Group and the aeromedevac crew ensured that the authorized medical allowance list containers were loaded onto the C-130 airplane and transported to Osan Air Base. The 3d Combat Aviation Brigade coordinated jointly with the Marines and the ROK Navy to guarantee delivery to a ROK Navy port.

A clear lesson learned from this scenario was that medical and logistics units understand the importance of working jointly and are even beginning to embrace mutual support relationships.

By finding a way to get the class VIII onto the airplane, the 18th Medical Group and the aeromedevac crew showed their “can do” mindset. The participation

and “Oorah!” attitude of the III Marine Expeditionary Force staff in Okinawa also contributed immensely to the success of this scenario.

Scenario 4: Joint Support to the U.S. Navy

This scenario focused on a joint operation between USAMMC-K, DDDK, and Navy personnel from the USS *Blue Ridge*. A Navy ship at port requested emergency medical supplies through USAMMC-K, and USAMMC-K coordinated the delivery.

Before enacting the scenario, the Navy established an account with USAMMC-K to facilitate the class VIII ordering process. The Navy used Non-Secure Internet Protocol Router email to submit orders for class VIII to USAMMC-K because the onboard system and Theater Enterprise-Wide Logistics System do not interface.

After receiving the order, USAMMC-K selected, packaged, and prepared the requested medical supplies for shipment. It also coordinated with DDDK and the 563d Medical Logistics Company to distribute the supplies and with the ROK Navy to obtain access to their port for the delivery. On the ship, the 563d Medical Logistics Company and the Navy conducted a joint inventory of the medical supplies and then transferred them to the Navy.

On the road ahead, USAMMC-K must develop critical items list requirements, work with the ROK to improve medical logistics collaboration, refine operation plans and exercises, and demonstrate the importance of medical logistics support operations to the USFK leaders. To project requirements and identify shortfalls in the supply pipeline, USAMMC-K will work with USFK and DLA to ensure that appropriate mitigation actions are taken. These scenarios have reinforced the fact that USAMMC-K must work with USFK, the ROK and DLA to coordinate medical logistics planning in peacetime in order to facilitate success during war.

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Expanding Logistics Capacity

BY LIEUTENANT COLONEL MATTHEW P. SHATZKIN

Logistics units preparing for expeditionary support operations must fully expand their support capabilities by knowing their on-hand capability and training to fill in the gaps.

The no-notice deployment last year of the 407th Brigade Support Battalion (BSB), 2d Brigade Combat Team (BCT), 82d Airborne Division, as the global response force to Operation Unified Response in Haiti was an example of how the Army as an expeditionary force deploys to places that have little to no initial logistics infrastructure. As the initial support force on the ground, the 407th BSB had to establish the support architecture while supporting its organic units and other units operating within the joint theater of operations.

Units inevitably experience a gap between the deployment of their own capabilities and the arrival of units with higher-level support capability. Although enduring the gap, while painful, is doable, a unit can reduce this gap by fully expanding its capacity beforehand.

Expanding and retaining new logistics capacity is not easy; it requires leaders with constant vigilance, creativity, and tenacity. It begins with the discipline to maintain situational awareness of specific unit status and continues with the initiative to create challenging training scenarios that will truly validate the strength of the unit's capability. Expanding logistics capacity to optimal levels required for contingency operations in immature theaters requires knowing current capacity, refusing to be "one deep," training beyond your formation, and contracting.

Know Current Capacity

Before expanding capacity, we must first know our current status. We often assume we possess a certain capability without truly knowing our strengths and weaknesses. In doing so, we may not realize that we actually possess less capacity than we need.

Therefore, we must fully understand the extent of our logistics combat power. Like combat power, logistics combat power involves a complete understanding and assessment of all components necessary, including the people, equipment, and training required to truly provide a capability.

For example, a logistics convoy involves much more than a fully mission-capable truck. It must have

a trained crew that has worked together; the crew must have a full complement of night vision equipment, binoculars, ammunition, navigation aids, and recovery items; and the convoy must be able to perform the mission during day and night.

The people-equipment-tasks (PET) framework is extremely useful in identifying shortfalls and limitations and ensuring that we have covered all the bases in examining our on-hand capability.

In each category (people, equipment, and tasks), we must ask quantity- and quality-oriented questions to determine our current status. Quantity-type questions are simple; they address if we are authorized the items and if we have them on hand. However, quality-oriented questions best determine our true status: Are our people deployable, does our equipment function, and are we ready to deploy?

Assessing status in each subcategory entails asking a series of questions and providing a status based on the answers.

People. Here are some sample questions for assessing the people category:

- ❑ Of the people we are authorized, how many are on hand?
- ❑ Of the people we have on hand, how many can deploy today?
- ❑ Do we have the leaders we are authorized?

The answers to these questions determine the level of readiness, which can be defined in terms of gold, green, amber, red, and black. To be gold in the people category means that at least 95 percent of the authorized people are on hand, 95 percent of the leaders are on hand, and less than 5 percent of the people are nondeployable overall.

To be green in the people category means that 90 to 100 percent of the people authorized are on hand, 90 percent of the leaders are on hand, and less than 10 percent of the people are nondeployable.

Being amber means that 80 to 90 percent of the people authorized are on hand, 80 percent of the leaders are on hand, and 15 percent of the people are nondeployable.

To be red means that 70 to 80 percent of the people authorized are on hand, 70 percent of the leaders are on hand, and 20 percent of the people are nondeployable.



The commander of the 407th Brigade Support Battalion diagrams the 2d Brigade Combat Team, 82d Airborne Division, concept of support with another officer early during Operation Unified Response.

Being black in the people category means that less than 70 percent of the authorized people are on hand, less than 70 percent of the leaders are on hand, and 30 percent of the people are nondeployable.

Equipment. Understanding equipment extends beyond knowing what is on hand and if it works. Particularly in our business, we must know if we possess all components to a system in order to make it work. Examples of those components are filters, hoses, pumps, test kits, chemicals, gauges, lubricants, and other critical components that constitute systems. A lack of components is analogous to a weapon without ammunition. Do we have sufficient spares and backups for the most critical components?

Tasks. Determining our task status involves understanding if we can perform the tasks required to provide a specified capability. To determine this status, we must first know how many battle drills comprise the task and if our teams can perform them to the prescribed performance measures.

After returning from Operation Unified Response, the 407th BSB transformed its biweekly command and staff meeting into a readiness review. During the readiness review, each company commander used the PET framework to communicate and describe his current

capabilities. This discussion provided a means to understand our shortfalls before a no-notice crisis. We also used our monthly unit status report to communicate our significant limitations and challenges.

Refuse to Be One Deep

Forward support companies (FSCs) have over 30 specialties—as many as there are within the infantry battalions themselves. The BSB and FSC both have duty positions to which only one person is assigned (the specialty is one deep), such as patient administrator, small-arms repairer, and environmental specialist. When we review the additional duties we require for organizational sustainment in an austere setting (such as armorer, communications specialist, field sanitation specialist, carpenter, barber, and combat lifesaver), we may find ourselves very thin on expertise.

We can overcome these vulnerabilities in several ways. For specialties that are one deep, on a regular basis we must conduct and capture cross-training that is measured against a level of proficiency. After cross-training, units should capture the new capability within their PET assessment. For example, “people” could be expanded to measure how many people have been formally cross-trained and certified in an area beyond their primary specialties.

Considering the number of functions needed to sustain a company, all troops should be assigned an additional duty and should be routinely tested on their ability to perform those additional duties to standard.

Train Beyond Your Formation

In any expeditionary mission, we will very likely have to perform missions out of our normal mission set or support forces beyond our normal customer base. In doing so, we inevitably will need to operate equipment that is not on our modified table of organization and equipment. The expeditionary or global response force version of pre-positioned equipment may be abandoned equipment that we can put into operation. Therefore, we must train beyond our formation.

For example, while supporting recovery from Hurricane Katrina, we used forklifts and rough-terrain container handlers (RTCHs) on loan from the Army Materiel Command to complete our container reception mission. We also hot-wired a stray John Deere

forklift to facilitate repositioning a combat support hospital.

In Haiti, our arrival/departure airfield control group (formed from our maintenance company) borrowed baggage carts from the international airport to expedite passenger reception and integration. Our maintenance company, with elements of FSCs from the 2d BCT, received 3 vessels and uploaded 12 to receive and eventually redeploy the BCT.

Training beyond our current formation begins with asking these questions that assess our logistics agility:

- ❑ Can we operate a RTCH or crane? Do we have the licensed operators to do so?
- ❑ Can we hot-wire a RTCH or other equipment?
- ❑ Can we maintain shotguns, sniper rifles, or foreign weapons? (Our supported force may gain such weaponry, or we may gain a force in the task organization that possesses such weaponry.)
- ❑ Can we maintain mine-resistant ambush-protected vehicles or nonstandard civilian power generation equipment? (Power generation on today's battlefield is absolutely critical, whether it be to support land forces or restore power to the indigenous population.)
- ❑ Can we pump water vertically from wells? If so, how far? (Pulling and purifying water from wells can be more difficult than pulling water from rivers and lakes.)
- ❑ Can we refuel rotary-wing aircraft?
- ❑ Can we test fuel?
- ❑ Can we receive and download vessels?
- ❑ Can we operate a railhead?
- ❑ Can we conduct class I (subsistence) break-and-issue operations? (This is a BSB mission that is often overlooked until deployment).
- ❑ Can we fabricate parts, hoses, and other items that are not available because of an immature supply

During Operation Unified Response, the 407th Brigade Support Battalion completed 35 fabrication and welding jobs, including this security arm used to open a critical supply gate at Toussaint L'Ouverture International Airport.



chain? (Although we performed 35 fabrication jobs in Haiti, BSBs are not authorized fabrication trailers, vans, lathes, or items necessary to fabricate parts).

- Can we perform low-cost, low-altitude airdrop, container delivery system airdrop, slingload operations, and other methods of air distribution?

In seeking answers to questions such as these, we assess our support agility and identify our training requirements. Obviously, we must assign priority to these training requirements, particularly if we are not fully trained on our organic capabilities. But we cannot delay in expanding our capacity either. We should address both our baseline capability and our capability beyond the baseline simultaneously. One method is to reward and empower specially selected Soldiers and small units by sending them to advanced training.

Training beyond one's formation does not come easily. It requires a great amount of tenacity and creativity on the part of leaders. Leaders must draw from past contingency deployments, identify requirements, and then actively pursue the resources required to build such capabilities. Units building capability beyond their formation should record these capabilities in their PET status.

Contract

Our contracting needs have changed little from conflict to conflict. During our Operation Iraqi Freedom deployment, we had the same needs as we did in Haiti. What changed was our ability to contract on our own. When we deployed to Operation Unified Response, we did not have trained, tested, and ready contracting teams at the company and battalion levels. We did not deploy with bags of money, draft performance work statements, or trained and ready contracting teams.

Logisticians—particularly those serving in a quick response, no-notice contingency—need to be contracting experts. Units performing expeditionary support operations will always have shortfalls in capacity until a higher-level logistics unit arrives or a permanent contracted solution is established; therefore, logistics units must maintain trained and ready contracting teams that are prepared to enact contracts immediately upon arrival.

While all companies must have teams trained and ready to enhance organizational sustainment, the support operations (SPO) contracting team is focused on expanding the logistics capacity of the BSB and FSCs throughout the BCT in order to lengthen the BCT's logistics reach. This SPO contracting team must contain internal security, translators, and a pay agent or field ordering officer team. It must have draft performance work statements ready.

The support capabilities and services that BSBs and FSCs inherently lack should be maintained in a

prioritized "hit list" for the contracting team to secure. Support and services that directly expand capacity are buses, container-handling equipment, cranes, 40-foot trailers, lowboys or heavy equipment transporters, land or warehouse space, refrigeration vans, power generation equipment, forklifts, fuel, fuel storage, and water transport and delivery.

The contracting team should target and secure vendors that can provide services that indirectly expand and facilitate support operations, such as floodlights, gravel, and supplemental labor. Had we not received over 50 general purpose tents from Fort Bragg, North Carolina, and Guantanamo Bay, Cuba, to protect our brigade's paratroopers from Haiti's unforgiving sun and rain, we would have desperately sought a source for festival-style tents. We were also fortunate to find vendors to provide plywood to build tent flooring to protect the troops from Haiti's harsh rains and other environmental threats.

The BSB must train and maintain a validated contracting capability to procure and manage contracts beyond simple certification or theory. The proper use of this type of contingency contracting team is not only a battle drill within the team, but a process throughout the BSB battlestaff. The BSB S-2 must provide leads for services through the logistics intelligence preparation of the battlefield.

In a nonpermissive environment, the BSB S-3 may coordinate with battlespace-owning sister battalions for key leader engagements to procure services. The BSB must validate the entire process through realistic home-station training and combat training center exercises. Once the unit establishes its contracting teams, it should integrate and track the contracting teams in the PET analysis of support capabilities.

To be fully prepared for expeditionary support operations, logistics units must fully expand their support capabilities ahead of time, beginning first with knowing their on-hand capability and continuing by training on scenarios that force them to use all skill sets, perform beyond their missions, and tap into contracted solutions. Logistics units that prepare in this manner will reap the benefits of increased logistics readiness, agility, and overall confidence to conquer any austere support environment.

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The 307th BSB and Iraqi Army Logistics

BY CAPTAIN KYLE W. BROWN

This article shares lessons learned by the 307th Brigade Support Battalion about the Iraqi Army logistics system and recommendations for U.S. forces that are partnered with Iraqi units.

In August 2009, the logisticians of the 307th Brigade Support Battalion (BSB), 1st Advise and Assist Brigade, 82d Airborne Division, deployed to Al Anbar province in Iraq to advise and train Iraqi Security Forces logistics units.

The 307th BSB headquarters was located at Al Asad Air Base, the hub of logistics in western Al Anbar and home to the 7th Iraqi Army (IA) Division headquarters. The 307th BSB pushed logistics support and training teams throughout Al Anbar, to include Camp Mejid, Camp Yasser, Baghdadi, Camp Hamza, An Nukhayb, Combat Outpost 160K, Fallujah, Habbaniyah, and Ar Ramadi. In each location, the 307th BSB was partnered with IA logistics units.

I was the headquarters and headquarters company commander and the officer-in-charge of developing IA logistics partnerships and training. In addition to commanding the company, my duties were to conduct key leader engagements with IA logistics commanders to determine training needs and then assign a suitable 307th BSB training team to each IA unit. I traveled to Iraq's national logistics supply and maintenance depot at Camp Taji to learn the IA logistics system from both IA leaders and their U.S. advisers from the Iraq Training and Advisory Mission-Army.

IA National-Level Logistics Organization

The Ministry of Defense (MoD) Deputy Chief of Staff of Logistics (DCOS LOG) oversees all IA logistics functional areas, including plans, ordnance, supply, the Taji National Depot, transportation and provisions, the Directorate of Electrical and Mechanical Engineering (D-EME), logistics and operations, and the location commands. He published the MoD DCOS LOG Handbook in both Arabic and English, detailing how the system works.

The three main functional areas within the MoD DCOS LOG that pertain directly to the partnership and logistics training offered by the 307th BSB include the Taji National Depot, the D-EME, and the location commands.

The Taji National Depot, located at Camp Taji in Baghdad, houses the highest level of maintenance in the IA. It is known as a fourth-line maintenance organization, and it is where the IA conducts wheeled and tracked vehicle restoration and repair.

The depot also houses the Joint Repair Parts Command (JRPC), which carries out fourth-line supply. JRPC is the Iraqi centralized national supply and distribution facility. It has numerous warehouses and open lots where JRPC receives, organizes, and distributes all class IX (repair parts) and new combat and nontactical vehicles.

D-EME is the final approval authority for vehicle code-outs and issue of heavy industrial supplies, which the Iraqis call the "big five" items: engines, transmissions, tires, batteries, and differentials. D-EME must provide direct authorization to JRPC to allow the release of heavy industrial supplies to the third-line maintenance units, called medium workshops.

The medium workshops are the highest level of vehicle repair and refurbishment at the regional level. The 307th BSB was directly partnered with two of the 13 workshops: the Al Asad medium workshop, which covers western Al Anbar province to include the 7th IA Division area of operation; and the Habbaniyah medium workshop, which covers eastern Al Anbar and mainly caters to the 1st IA Division.

The Al Asad medium workshop commander works with the commander of the 7th Iraqi Army Division Motor Transportation Regiment maintenance company and the Al Asad medium workshop operations officer.



Of major importance to the medium workshops is the Iraqi Asset Management Program (IAMP), an Internet-based portal that provides real-time work-order submission, information on replacement-parts availability at JRPC, replacement-parts ordering and tracking, and technical manuals translated into Arabic for download.

IAMP was originally developed in 2006 by a contractor named Anham, LLC, which was awarded the national maintenance contract for setting up what has become the medium workshops. Anham brought in its own mechanics and procured parts through its own logistics channels. Throughout Iraq during 2007 and 2008, Anham partnered with groups of U.S. mechanic advisers known as logistics training advisory teams and conducted vehicle maintenance and repair training with IA mechanics.

In 2009, Anham withdrew from all medium workshops to manage IAMP from JRPC at Camp Taji. Soon thereafter, MoD purchased the IAMP software program, shifting Anham's role to training the IA in how to run IAMP themselves. Work orders and replacement-parts requests entered into IAMP by medium workshops are now reviewed and tracked by JRPC to manage national combat readiness and track parts availability and demand.

IAMP is similar to the U.S. Army's Standard Army Maintenance System Enhanced (SAMS-E), making it easy for SAMS-E technicians to learn IAMP and assist their Iraqi partners. The 307th BSB employed a special IAMP administrator account with view-only access to review the IAMP accounts of all 13 medium workshops in Iraq. The information was used to generate discussions with medium workshop commanders concerning specific vehicles that they had difficulty repairing. The information was also used to assist with the development of maintenance training plans and to shadow-track parts requests to JRPC and D-EME.

The last major functional area that pertained to the 307th BSB was the location commands. The location commands, in coordination with the base engineer, run facilities and installation life support for IA bases. They maintain power generation stations, buildings, and fuel storage and retail sites. They also run dining facilities and ensure that the bases have clean running water, proper sewage water disposal, and suitable gate security.

The location commands are partnered with the logistics military advisory teams (LMATs), which are part of the Iraq Training Advisory Mission-Army program. The LMAT is designed to advise and assist the location commands with their facilities management. As part of the drawdown of U.S. forces, the Camp Mejid LMAT, composed of five U.S. Navy personnel, relocated to Ar Ramadi and consolidated with the Habbaniyah LMAT, leaving room for the 7th IA Division

military transition team (MiTT) (a Marine Corps unit) and the 307th BSB to step in and assist.

IA Division-Level Logistics Organization

IA divisions have two lines of maintenance: the motor transportation regiment (MTR) and the field factory workshop (FFW), which facilitate first- and second-line maintenance, respectively. At Camp Mejid, the 7th IA Division MTR facilitates first-line maintenance for the 7th IA Division headquarters and distributes supplies to its four brigades.

The size of western Al Anbar province, stretching to the borders of Syria, Jordan, and Saudi Arabia, presents significant challenges to the 7th IA Division's ability to deliver supplies and to curb maintenance and replacement-parts requirements. In addition, each brigade has its own first-line maintenance and supply platoon that the Iraqis call the repair platoon. The 307th BSB maintenance company partnered with the MTR and conducted numerous key-leader engagements with its logistics officers and provided wheeled vehicle repair and welding training to its maintenance company.

If the first-line maintenance unit (the MTR or repair platoon) is unable to make the repairs or does not have the necessary repair parts, broken vehicles and replacement-part requests go to the second line. The second line of maintenance is conducted by the 7th IA Division FFW located at Camp Mejid.

The FFW uses IAMP offline to input work orders and replacement-part requests. Personnel then copy the information on a computer disk and upload it to the online JRPC national database at the medium workshop. If the FFW is unable to make the necessary repairs or does not have the repair parts, it escalates the issue to the third-line medium workshop, also known as the garrison support unit. The 307th BSB was partnered with and conducted both IAMP and maintenance training with the FFW and the medium workshop.

At the division level, the Iraqis also have a second-line supply unit named the 7th IA Division Ordnance Park (OD). The OD handles all classes of supply other than class IX, which is handled by the FFW. The OD uses the 7th IA Division's supply officer (G-4) to route supply requests up the chain of command. The division G-4, with approval from the 7th IA Division commander, routes the supply request through the regional support unit (RSU), located at Habbaniyah. The RSU supports the entire Al Anbar province, including both the 1st and 7th IA Divisions. The 307th BSB's distribution company was partnered with the OD.

The Advisory and Assistance Mission

Typically, arriving U.S. military units conduct a relief-in-place and transfer of authority (RIP/TOA) with outgoing units of similar size and capability, so logistics units would swap out with other logistics

units. However, in Al Anbar province, the 307th BSB was deploying into a Marine Corps area of operations. The cross-service transfer added the challenge of differing ranks, counterparts, and cultures.

The 307th BSB, being part of the first “production model” advise and assist brigade that the U.S. Army had developed or deployed, was without a direct unit to conduct the RIP/TOA. Therefore, we began our partnering mission by contacting the 7th IA Division MiTT, a small Marine Corps team.

The 307th BSB quickly discovered that the MiTT was not designed to conduct advisory, assistance, and training missions to a division-sized unit. Therefore, the 307th BSB’s highly-trained and well-equipped logisticians, including armament technicians, ammunition specialists, fuel experts, light and heavy wheeled vehicle mechanics, welders, medics, doctors, and warehouse specialists, moved forward with a comprehensive training plan.

Initially, the plan was based on the needs and requests identified during key-leader engagements, but within a few months, the partnership and training became so robust that it took the combined efforts of the 307th BSB company commanders, training teams, support operations functional experts, and operations shop to coordinate, prioritize, and execute training and assistance requests.

The IA has a lot of respect for the knowledge and capabilities of the U.S. Army and was very receptive to training opportunities. IA soldiers know that a truly successful army is not just measured by its ability to shoot, move, and communicate but, most importantly, by its ability to sustain combat power over a prolonged period with its own logistics units and supplies. They acknowledge that U.S. forces are departing soon and they must learn critical sustainment knowledge quickly.

The 307th BSB embraced its IA counterparts and created an active partnership and training program. To facilitate reaching out across Al Anbar province to the 27th, 28th, and 29th Infantry Brigades of the 7th IA Division and to engage the 1st IA Division, including the Habanniyah medium workshop, the 307th BSB developed a mobile training team. The mobile training team had a logistics expert from each of the 307th BSB’s military occupational specialties to assess the IA soldiers’ knowledge and specific challenges at each location and to conduct prescribed training.

Based on requests from the 7th IA Division commander, I developed a training program specifically designed for IA logistics lieutenants and captains. The program is based on MoD logistics doctrine and includes lessons learned from the Taji National Depot (fourth-line maintenance), the JRPC (fourth-line supply), the D-EME quarterly conferences, LMATs and logistics training advisory teams, and working with top

IA logistics leaders from the MoD level down to the junior officers.

The training program was conducted in both Arabic and English. Each IA officer student received compact discs that contained MoD doctrine, course presentations, IA modified tables of organization and equipment for each of its units, and all published logistics technical manuals translated into Arabic.

The IA’s Major Obstacles

The 307th BSB identified facilities management, replacement parts, and medical care as the IA’s greatest challenges.

Facilities are managed by the location commands in coordination with the base engineer and include power generation stations, water pumping and treatment plants, wastewater disposal facilities, and fuel storage and distribution facilities. At Camp Mejid, home of the 7th IA Division headquarters, LMAT advisers spent over \$11 million to build an industrial-sized power generation and distribution station that includes 10 1.1-kilovolt generators.

At one point, 8 of the 10 generators were not operating and the main switch was blown. Fixing the power generation problem was costly and time consuming. The problem left 7th IA Division soldiers without power for several hours a day and scrambling for small generators to power individual heating, ventilation, and air-conditioning units and, in some cases, making fires to keep warm.

The 307th BSB’s water tests found that Camp Mejid’s potable water drawn from a nearby oasis well was contaminated with *E. coli* bacteria and was unfit for human consumption. This forced the Iraqis to ship potable water from Al Baghdadi (which also tested positive for contaminants). Furthermore, the 4.4-million-liter fuel pumping station at Camp Mejid was devoid of fuel filters, fuel water separators, and a fuel circulation system.

The IA maintenance units also struggle with computer and electrical-based repairs. For example, the U.S.-made M1114 high-mobility multipurpose wheeled vehicle adopted by the IA as its main combat vehicle is a sophisticated piece of machinery involving a computer-based operating system. The Iraqi mechanics find the wiring and computer-chip replacements difficult to understand and repair.

They have also resisted the adoption of IAMP, a real-time online supply ordering database and combat power tracking system that quickly allows JRPC to understand which replacement parts are in the highest demand. If the IA stops using IAMP, they will move backward to a pen-and-paper ledger system, thwarting progress into the digital age and dramatically slowing an already painfully slow replacement-parts ordering, approval, and delivery process.

The third major obstacle faced by the IA is medical and dental care. The 307th BSB medical partnership expert conducted medical training and assessments at the Camp Mejid medical clinic many times. She found medical officers who were biologists and chemists, but none who were school-trained doctors.

The 7th IA Division does not have a doctor, physician assistant, or dentist. The medical staff does not include a school-trained nurse or dental hygienist. The IA's few medics scarcely have the knowledge of a typical U.S. Army-trained combat lifesaver. (The combat lifesaver course is a 40-hour block of medical training provided to most U.S. Army Soldiers.) A lack of training leads to a lack of understanding of how the human body works and, therefore, misdiagnosis.

Another major obstacle the Iraqis must overcome is a lack of formal education and training. According to a United Nations Environment Programme study conducted in 2003, Iraq is the 6th most illiterate country in the world, with 59.6 percent of its population unable to write a short, simple statement on everyday life.

Saddam Hussein made education free to all Iraqis, but his policies also directed against the use of televisions, cell phones, or the Internet and stifled Iraqis' ability to keep up with the outside world. Technology and opportunity opened when Iraq was liberated in 2003. Iraq quickly embraced what the world had to offer in terms of technology, but it will take time and modernized education systems to fully harness the technologies.

One course of action might be for the United States to ask the United Nations on behalf of Iraq to assist with funding and developing a plan to energize Iraq's national education system at every level. The plan could include training for skilled trades; civil, electrical, and computer engineering; and medical professions of all types. Through developing Iraq's educational system, trade and professional skill sets organic to Iraq will allow Iraqis to thrive in a modern era.

A much smaller but much more quickly achievable step that U.S. forces can take during partnership and training events is to provide paper copies of technical manuals translated into Arabic and reinforce preventive maintenance checks and services as a part of the daily routine.

Recommendations for an Advise and Assist Brigade

If available, dedicate a partnership cell within the BSB operations section that includes a captain, lieutenant, and sergeant first class or above. The cell will require at least two category II interpreters, preferably U.S. citizens. The noncommissioned officer in your partnership cell should centrally manage all interpreters across the battalion. Ensure the cell studies Iraqi culture and language prior to deployment. A book worth reading before arrival is *Understanding Iraq* by William R. Polk.



The supply officer of the 7th Iraqi Army (IA) Division military transition team (U.S. Marine Corps), the commander of the 7th IA Division Motor Transportation Regiment (MTR), the commander of the 307th Brigade Support Battalion Headquarters and Headquarters Company, and the commander of the 7th IA Division MTR maintenance company stand together in November 2009.

Contact U.S. advisers who are part of the Iraq Training and Advisory Mission-Army to schedule personnel to attend the Counterinsurgency Stability Operations Course Logistics Conference, visit the Taji National Depot (including the JRPC), and download and study the MoD DCOS LOG Handbook.

Finally, obtain point-of-contact information for the trainers of the IAMP from the Iraq Training and Advisory Mission-Army. Each member of the partnership cell should attend the 5-day IAMP course.

This article is an overview of the IA logistics system, the challenges it faces, and the humble recommendations of the 307th BSB. We trained, advised, assisted, and befriended hundreds of IA soldiers and their senior leaders throughout Al Anbar province. We hope that the efforts of the 307th BSB will enable our Iraqi partners and follow-on U.S. forces to take the next steps toward the long-term self-sustainability of the Iraqi Security Forces.

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Lessons in Adaptation: The ICTC on the Nonlinear Battlefield

BY CAPTAIN NICHOLAS G. CATECHIS

The author provides insights in leadership and management from his case study of an inland cargo transfer company in Operation Enduring Freedom.

The term “global war” refers to more than just battlespace maneuvers; it connotes the requirements of a globally thinking logistics chain. That logistics chain is where the inland cargo transfer company (ICTC) is ideally suited for use. From railheads to port operations, through receiving, staging, and onward integration functions and convoy movement, the ICTC is perhaps the most adaptable logistics formation in the Army. Many lessons in management can be learned from the effective employment of an ICTC.

Analyzing the Support Process

Army logisticians have long been students of the concepts and principles associated with the question, “How can we better serve the warfighter?” The mere idea of applying expertise and professional skills in the service of warfighters often leads logisticians to overanalyze the doctrinal intricacies of their supported combat units. The complex and elaborate mission sets of maneuver units determine our approach to support in general, but we must not fall short in identifying the complex mission sets in our own formations.

As important as the endstate is, we must not lose sight of the process. We typically summarize a sustainment unit’s deployment in numbers of items or in tons of supplies moved; however, rarely do innovation and sensible process improvement persist. On the other hand, focusing on processes without regard to the outcome suggests irresponsibility on the part of leaders at all levels.

Operational Demand

During the past 6 years (and possibly longer), many ICTCs have supported Operation Enduring Freedom (OEF) with few adaptations to task organization. However, the demand for resources persistently changes. As our customer units adapt to the changing face of the enemy, our support concept should adapt as well. As ICTC assets are moved to the farthest reaches of the battlespace, the task organization of those assets should adjust to align with the process of managing the supply chain.

Maneuver commanders continuously evaluate their areas of operation to best determine the means in which they will maximize their assets against the opposition. This far too often requires sacrifices to be made in one area—speed, for example—in order to preserve combat

power. Speed might be sacrificed by choosing a formation or terrain that is more advantageous to protecting the force. The same concept holds true for sustainment units.

Planning

When assessing the requirements for assets at multiple forward operating bases (FOBs), key planning tasks must be consciously centered on establishing equilibrium among mission command, administrative functions, and maintenance functions.

Decision points for this planning model focus on current mission statements and core support objectives set by the supported unit commander, as well as on forecasted unit movements and the presence of U.S. units in otherwise unoccupied locations. While planning, an ICTC commander will mediate between the organizational objectives of each supported FOB and those of the direct higher command element.

Generally, unclear and underdefined scopes of responsibility exist throughout the ranks of the ICTC’s parent echelons. For this reason, establishing a baseline of operational control at the ICTC command level is imperative.

Organization

The Army has applied modularity to nearly every organizational structure down to the company level. The ICTC is an ideal candidate for the downward push of the modular concept beyond the company, and even platoon, level. This push does not necessarily call for drastic adjustments to the personnel and equipment structure of the company, but it does require a more thorough assessment of mission requirements during the sourcing for deployment in order to meet specific mission objectives.

Although it has become common to deploy the ICTC as a series of detachments, the detachments are not aligned with the mission sets of each supported unit. Once in theater, these units are forced to reorganize into small teams for the purpose of supporting a larger number of FOBs.

These diminutive personnel support packages are determined solely by the need for a particular expertise. If the ICTC is deployed just to provide experienced materials-handling equipment (MHE) operators, then the unit’s competencies are clearly not understood and its capabilities and effects are degraded exponentially.

The ICTC's task organization must be centered on capitalizing on its organic 88-series military occupational specialty (MOS) Soldiers.

Leadership in the ICTC must be decentralized down to the squad level, and often the team level, to maximize its capabilities. The command cell must colocate with the battalion headquarters not only to benefit from more centralized administrative and maintenance support but also to engage actively with the support operations section.

Perhaps the most important ally with which to maintain an open rapport is the joint transportation office (JTO). This entity exists to pursue and report all unit movements, including personnel and transportation of cargo and materials. Movement information is key to predicting personnel and equipment assets needed at each critical logistics hub.

The second benefit of a partnership with the JTO is that commanders at all levels, from operational to strategic, can receive valid information that allows for a more legitimate and justifiable sustainment force package when creating the request for forces during the sourcing phase of unit deployment screenings. Although this type of preparation and planning is not necessarily available to the majority of commanders at the user level, it is important to take note of those enablers whose influence is well within reach.

The movement control team (MCT) is presently the most probable consumer of ICTC assets in a direct supporting relationship. The relationship between the MCT and the ICTC is one of operational control. In this relationship, the ICTC commander maintains absolute control of all administrative and maintenance functions and the MCT commander provides mission-related guidance. The direction of all administrative and maintenance-related activities should be handled by the ICTC headquarters element.

Organizing each imbedded team to resemble one another is the most effective use of resources. However, personnel alignment is not absolute with a predetermined model, and if it were, it would likely hinder efforts to meet the commander's intent.

The suggested design of a team should relate to the actual mission set and key tasks of, for example, the MCT. Once these are identified and communicated, the commander will then have positive influence and control over how his assets are engaged. But in order for this to occur, commanders must take full advantage of the relief-in-place/transfer-of-authority process, not only to communicate administrative policies but also to amend task organization.

Current operational configurations must be fully communicated to the incoming command only after a thorough mission analysis has been conducted with the approval of the next higher level of command. The ideal model for forward cargo transfer operations consists of a heavy concentration of cargo specialists, one or two

transportation management coordinators, and one or two motor transport operators. Maintenance personnel would be predetermined as well, based on the type and amount of equipment and with consideration for the ratio of contracted versus government MHE.

Equipment

Theater pre-positioned equipment is basically exhausted because of the operational demand placed on it over the past 9 years. The current configuration of such equipment in Regional Command East consists of a combination of civilian-contracted MHE and government-owned items.

While the ICTC commander maintains ownership of the equipment, the MCT commander's involvement is a decisive factor in mission success. Even if the ICTC direct support maintenance team is located far away at another FOB, the MCT headquarters section must maintain responsibility for establishing maintenance support at each respective FOB.

Information Technology

When it comes to information technology and signal capabilities, the ICTC provides the necessary computers and other automated equipment and the MCT provides technical support. The ICTC should formulate a compliance team with the assistance of the battalion staff. This team will frequently conduct site visits to each of the supported FOBs to maintain friendly and professional relationships, which are best made in person.

Maintenance readiness reporting is not possible through the ICTC's Standard Army Maintenance System (SAMS) "box" for each FOB. The supporting maintenance units are responsible for loading the information into their SAMS boxes and for ordering parts as needed. This practice can significantly skew the ICTC commander's operational readiness rate, however, because only MHE information is located with the headquarters element.

This case study on leadership and the management of resources is designed with the intent of fostering a discussion of processes and planning improvements. Commanders are certainly not to approach these concepts and theories with expectations of achieving self-actualization or enlightenment; however, when advanced emphasis is placed on the value of adaptation, the benefits will be overwhelming.

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Sustainment Lessons Learned From Combined Joint Task Force-82

BY COLONEL MICHAEL C. LOPEZ

Combined Joint Task Force-82 developed plans and oversaw operations for sustaining civil-military counterinsurgency operations in Regional Command East in Afghanistan. The author shares lessons learned from that deployment.

I served as CJ-4, Director of Logistics, for Combined Joint Task Force-82 (CJTF-82) in Regional Command East in Afghanistan from May 2009 to June 2010. This 13-month deployment to Operation Enduring Freedom with the 82d Airborne Division provided many sustainment lessons learned. This article discusses coalition and joint staff sustainment operations and provides recommendations for transitioning tactical logistics division staffs into operational sustainment coalition and joint teams, developing a systems approach to sustainment operations, and transmitting historical knowledge among staffs.

The CJTF-82 CJ-4

The CJTF-82 headquarters was located at Bagram Airfield, Afghanistan, and, in partnership with the 201st and 203d Afghan National Army (ANA) Corps, provided combined mission command of Regional Command East. The CJ-4 staff consisted of 44 coalition, joint, interagency, and contractor personnel.

The staff was organized into the following cells: administration, supply and services, maintenance, transportation, operations, plans, liaison officers, and staff embedded with the 201st and 203d ANA Corps. The staff's mission was to develop sustainment plans and policies and provide procedural oversight for brigade task forces and enablers to sustain civil-military counterinsurgency operations, maintain combat power, and extend operational reach.

Predeployment Training

The road to Afghanistan began at Fort Bragg, North Carolina, in June 2008. The 82d Airborne Division's focus was split between getting brigade combat teams manned, equipped, and trained for programmed deployments to Iraq and Afghanistan and preparing the division staff for deployment as a CJTF.

Division-level staff training consisted of individual combat skills training, staff-specific training, professional development courses sponsored by the Leader Development and Education for Sustained Peace

program, staff certification training sponsored by the Battle Command Training Program and the U.S. Joint Forces Command's Joint Warfighting Center, and a series of predeployment site surveys (PDSSs) in Afghanistan.

The division chief of staff had each staff section develop PDSS objectives prior to departure and complete a trip report upon return. This requirement was effective in focusing the staff on the task and purpose of the PDSS visit. The G-4 section used this process to generate running staff estimates to define how sustainment operations worked in Regional Command East. As the section focused on defining and discussing how processes worked, the focus shifted to mapping the process, including inputs, outputs, and desired outcomes.

Process maps were measured against Field Manual 3-24, Counterinsurgency; Field Manual 4-0, Sustainment; Joint Publication 4-0, Joint Logistics; and Joint Publication 4-08, Joint Doctrine for Logistic Support of Multinational Operations. The doctrinal review provided the intellectual foundation to understand staff roles, U.S. Code Title 10 responsibilities, and the functions of combined-joint boards, bureaus, centers, cells, and working groups (B2C2WGs). An assessment of multiple PDSSs indicated a systems approach was the critical path to providing sustainment at the operational level.

The CJ-4's first priority during division and higher staff-level training was to define the core sustainment B2C2WGs, refine the process, and quantify how the output affected the bottom line, which was to sustain counterinsurgency operations, maintain combat power, and extend operational reach. The second priority was to identify cross-staff and external CJTF relationships that would be developed to facilitate synchronized, integrated actions. The third priority was to develop an effective process to manage and disseminate information across a staff that would have to endure a combat battle rhythm, a nonstop string of email, and a portal-based information management process.

Systems Approach to Sustainment

The 82d Airborne Division took over the transition of authority for coalition and joint forces in Regional Command East on 3 June 2009 and relinquished that authority on 14 June 2010. The CJTF-82 counterinsurgency strategy was based on four lines of operation: information, governance, development, and security. This strategy was implemented through a coalition, Afghan, and interagency team integrated from the infantry battalion task force level through the CJTF level. The strategy was focused on developing a unified effort at all levels and across all lines of operation to build and enhance the legitimacy of Afghanistan's government.

Operational sustainment supported the lines of operation by instituting a team approach to solve problems and develop a sustainment B2C2WG process that addressed the areas of force flow, sustainment, maintenance, contract services, and Afghan National Security Forces (ANSF) development. The team was coined the "Log Nation" and consisted of joint, coalition, and contract logisticians.

The team's members included representatives from the CJTF staff, the 45th and 82d Sustainment Brigades, the 401st Army Field Support Brigade (AFSB), the brigade support battalions, the 455th Expeditionary Aerial Port Squadron (EAPS), a deployment distribution team from the 831st Deployment Distribution Support Battalion, the Defense Logistics Agency, the Defense Contract Management Agency (DCMA), the National Guard Bureau, the Logistics Civil Augmentation Program (LOGCAP), the Joint Contracting Command-Afghanistan (JCC-A), Regional Support Team-East (RST-E), ANSF Development Support-East (ADS-E), and the 201st and 203d ANA Corps G-4.

Force Flow

The force flow was managed through a weekly portal-based Adobe Connect coalition and joint reception, staging, onward movement, and integration working group and board. This process existed before CJTF-82's rotation but was enhanced. The working group was chaired by the CJ-4, the board was chaired by the deputy commanding general for support (DCG-S), and the process was hosted by the CJ-4 transportation officer.

The board members included the CJTF staff weather officer, the CJTF CJ-3 force manager, the CJ-4 transportation officer, a liaison officer from Manas Air Base, Kyrgyzstan, coalition and U.S. brigade mobility officers, a National Guard Bureau representative, the Bagram Airfield base operations support integrator, a deployment distribution team from the 831st Deployment Distribution Support Battalion, and representatives from the Bagram 455th EAPS and the 45th and 82d Sustainment Brigades.

The group's focus was to track the onward movement of commander's critical items and sensitive-items cargo, the onward movement of personnel, and the inbound and outbound movement of ground cargo through various nodes in the region. Performance was measured in terms of latest arrival dates, commanders' required delivery dates, ground lines of communication transit times, port calls, vessel sail dates, and container pilferage reports.

The result was an improved ability to see the regional distribution system, assess performance across the region and theater, forecast delays, and coordinate with the U.S. Central Command Deployment Distribution Operations Center and the Military Surface Deployment and Distribution Command for suitable alternative courses of actions.

Sustainment

Sustainment was managed through a weekly portal-based Adobe Connect process called the combined action facilities expansion (CAFÉ) working group and board and a quarterly portal-based Adobe Connect logistics readiness council.

The CAFÉ working group was a new process developed as a means to manage force expansion base construction projects at forward operating bases and combat outposts. The logistics readiness council was a modification of an existing process.

The CAFÉ working group was chaired by the CJ-4, CJ-7, and RST-E, and the board was chaired by the DCG-S. The board members included representatives from the 45th and 82d Sustainment Brigades, coalition and U.S. brigade logistics officers, a brigade-level LOGCAP support operations officer, LOGCAP quality assurance representatives, and assistant contracting officers.

The CJ-4 focused on coordinating the procurement and sustainment of base construction and facilities expansion projects in support of U.S. forces across the region and integrating the efforts of the RST-E for procurement and sustainment support to ANA forces. Units procured materiel through a combination of the Federal supply system, JCC-A host-nation contracts, and LOGCAP service contracts. The contracting team, on behalf of the units, resourced sustainment through JCC-A or LOGCAP service contracts. Contracts were approved through a coalition joint acquisition review board that included the CJ-1, CJ-3, CJ-4, CJ-7, CJ-8, and staff judge advocate. The CJ-4 provided logistics support to coalition partners through an acquisition and cross-servicing agreement.

The CJ-7 focused on coordinating construction projects in support of U.S. forces, while RST-E coordinated procurement, sustainment, and construction projects in support of ANA forces across the region. Construction projects were approved through a coali-

tion joint facilities utilization board chaired by the CJ-7. The result was an increased ability to plan basing requirements holistically, manage projects from a resourcing and construction perspective, and manage expectations. The CAFÉ was a regional application of the combatant commander logistics procurement support board.

Three lessons were learned from this process:

- ❑ Integrate the regional contracting office, a LOGCAP support officer, an assistant contracting officer, and a quality assurance representative into the brigade task force sustainment team to assist with development of performance work statements.
- ❑ Implement the CAFÉ working group at the brigade task force level to synchronize facilities construction projects for the companies and platoons.
- ❑ Focus on the critical resourcing path and joint processes—real estate approval, the joint facilities utilization board, and the joint acquisition review board—for real estate and facilities development, building materials, labor, materials-handling equipment, waste removal, operations, and maintenance services.

The logistics readiness council was chaired by the DCG-S and hosted by the CJ-4 supply and service chief. Council members included representatives from the 45th and 82d Sustainment Brigades, the 401st AFSB, U.S. brigade logistics teams, the JCC-A, LOGCAP, and DCMA. The primary purpose of the quarterly meeting was for the brigade task forces to forecast resource requirements over a 90-day period in the areas of redeployments and deployments, new equipment fielding, LOGCAP new work projects, service contract renewals, contracting officer's representative transitions, and performance evaluation boards (PEBs). A PEB is a forum to discuss, evaluate, and document contractor performance.

The quarterly meeting helped to create the baseline document to transfer historical knowledge between brigade task forces during relief-in-place and transfer of authority operations.

Maintenance

Maintenance was managed through a weekly portal-based Adobe Connect process simply called the maintenance working group. This was not a new process, but it was the only maintenance meeting attended by a general officer in Regional Command East. The working group was chaired by the DCG-S and the process was hosted by the CJ-4 maintenance officer. Attendees included representatives from the 45th and 82d Sustainment Brigades and 401st AFSB, coalition and U.S. brigade maintenance officers, and the ANA G-4.

The meeting's focus was on the readiness of rotary-wing aircraft, mine-resistant ambush-protected

(MRAP) vehicles, and coalition combat systems. The discussion of rotary-wing system readiness incorporated an overview of the aviation threat, military rotary-wing operating tempo and hours, and contract air hours.

The MRAP system readiness discussion involved battle damage assessment and operational trend analysis, system retrograde, repair timelines, and the new equipment fielding schedule. The result of the discussion was the ability to assess and measure performance, forecast readiness, identify operational trends, and engage the AFSB.

One of the innovative processes used to measure MRAP readiness was the repair-to-damage ratio. This simple ratio compared the number of systems repaired to the number of systems damaged in combat for a given period. It provided the command with a clear assessment of whether the maintenance program was exceeding, maintaining, or falling behind expectations.

Contract Services

Contract services were managed through a bimonthly portal-based Adobe Connect session called the LOGCAP working group, which was a new process. The working group was chaired and hosted by the CJ-4 LOGCAP officer. Working group members included contract service providers and representatives from LOGCAP, the JCC-A, and brigade logistics teams.

This was a forum to address contractor compliance, share best practices, provide direction to contractors, discuss contract officer's representative and quality assurance officer audits, identify performance trends, and prepare for monthly audits, quarterly PEBs, and semiannual award fee evaluation boards (AFEBs).

The AFEB is similar to a PEB in structure except that the purpose of the board is to award a bonus based on performance. It would be best to conduct the LOGCAP working group in advance of the quarterly PEB and semiannual AFEB to adequately prepare for these forums.

ANA Logistics Development

ANA logistics development was managed through a weekly portal-based Adobe Connect session called the ANA logistics synchronization session. The forum, a new process, was chaired and hosted by the CJ-4 ANA officer. The synchronization session (at the regional level) complemented the command and staff partnerships at the company, battalion, brigade, and corps levels.

The board members included embedded logistics staff from the 201st and 203d ANA Corps, RST-E, ADS-E, and coalition and U.S. sustainment units. This

Specialized Tools Should Be a Priority for Movement

I am an active-duty Army aviation major, and I spent the majority of my past 5 years managing aviation maintenance in both Iraq and Afghanistan. I just wanted to point out a more recent lesson learned from my time as an aviation unit maintenance (AVUM) company commander at Bagram Airbase in Afghanistan that I thought would be applicable across the maintenance spectrum.

All maintainers of ground or aviation equipment faces the never-ending ordeal of keeping their specialized tools and test equipment within TMDE (test, measurement, and diagnostic equipment) standards and available at multiple locations during split-based operations. I would highly encourage any maintenance commander or NCO [noncommissioned officer] facing an upcoming deployment to take a careful look at which tools are the hardest to replace and will

be needed on the ground immediately upon the unit's arrival.

These specialized tools should be made a priority for air movement into theater instead of being moved by ship and then ground. This is especially true for any deployment to Afghanistan, where all your MILVANS [military-owned demountable containers] will be transported using contractors via line haul through Pakistan.

I personally saw 5 of my 20 MILVANS pilfered en-route, to the tune of almost a half-million dollars in losses. One of these MILVANS also had critical test equipment needed for CH-47 maintenance and took almost a full month to replace.

Don't make my mistake! Get your high value and critical tools moved by air so they are available on day 1.

MAJOR TED REAM
FORT LEAVENWORTH, KANSAS

process was effective at the tactical and operational levels, but it could have been improved by incorporating ANA capital region logisticians (located in Kabul) into the process to facilitate an end-to-end integrated logistics process linking tactical-level logistics execution with strategic-level logistics planning.

The CJTF-82 CJ-4 team was successful because it—

- ❑ Reviewed Army and joint sustainment doctrine to understand Title 10 responsibilities and the purpose and functions of combined-joint B2C2WGs.
- ❑ Developed a team approach to sustainment incorporating coalition, Department of Defense, Department of the Army, and contract agencies.
- ❑ Used portal-based technology to share information.
- ❑ Used a systems approach to sustainment based on the core B2C2WGs to effect sustainment at the operational level and support the commander's intent and operational priorities.

The next logical step to improving long-term sustainment in Regional Command East would have been to begin the process of sharing responsibility and authority for sustainment operations with the 201st and 203d ANA Corps, setting the conditions for eventual transfer of authority.

Supporting strategies would need to be developed to transfer base services on combined-action forward operating bases and combat outposts from LOGCAP contracts to host-nation regional contracts. Strategies for developing regional trade skills in plumbing, electricity, carpentry, and masonry should complement the strategies for transferring select bases, facilities, and property to Afghanistan's

government. The processes used to transfer control in Iraq should form a good baseline.

The challenge of such a transition will be the development of a local Afghan vendor base to create jobs and employ a local Afghan labor force that meets an agreed-upon standard of performance. This effort will have to be managed through a regional, interagency, combined approach in which the acquisition and procurement process will play a part. The goal will be to transition this process at the provincial and district levels to a functional Afghan government.

The benefits of developing a local Afghan vendor base will be the creation of a skilled workforce, retention of incomes locally, creation of local jobs (which should help to reduce incentives for violence), development of an enduring process for a transition of authority, and establishment of a local industrial base. These benefits will enable the timely withdrawal of U.S. and coalition forces in accordance with the National Command Authority's objectives.

COLONEL MICHAEL C. LOPEZ IS CURRENTLY ATTENDING THE INDUSTRIAL COLLEGE OF THE ARMED FORCES. AFTER GRADUATION, HE WILL ASSUME COMMAND OF THE 403D ARMY FIELD SUPPORT BRIGADE IN KOREA. HE SERVED AS THE 82D AIRBORNE DIVISION G-4 FROM 2008 TO 2009 AND AS THE COMBINED JOINT TASK FORCE-82 CJ-4 FROM 2009 TO 2010. HE HAS A PREVIOUS COMBAT DEPLOYMENT TO AFGHANISTAN AND TWO COMBAT DEPLOYMENTS TO IRAQ. HE IS A GRADUATE OF THE INFANTRY OFFICER BASIC COURSE, ORDNANCE OFFICER ADVANCED COURSE, COMBINED ARMS AND SERVICES STAFF SCHOOL, SUPPORT OPERATIONS COURSE, ARMY COMMAND AND GENERAL STAFF COLLEGE, AND SCHOOL OF ADVANCED MILITARY STUDIES.



Special Operations Logistics Support: Sustaining Victory

CAPTAIN CISCO J. FULLER

The nature of a Special Forces unit makes providing its logistics support a unique challenge.

Supporting operational detachments alpha (ODAs) at the Special Operations task force (SOTF) level in a theater of operations requires efficiency and speed. ODAs do not have time for the logistics hierarchy to run its course. The support company organic to the Special Forces battalion must be able to exploit “Big Army” systems and must be proficient in procuring local host-nation support because logistics functions always have to outrun operations.

Accurately forecasting future requirements will ensure that the Special Forces battalion leaders have

the maximum combat power available at all times. The logisticians of the support company’s service detachments must help to ensure that ODAs can remain focused on pressuring enemy networks and conducting their wartime mission.

The organic battalion support company in a Special Forces battalion has four main detachments: headquarters, military intelligence, signal, and service. The primary logistics arm of the company is the service detachment, which is tasked to provide the battalion with immediate direct logistics support, including all aspects of deployment, redeploy-



Special Operations Task Force 52 riggers prepare to hook up an M1151 high-mobility multipurpose wheeled vehicle to a direct support CH-47 Chinook helicopter at Joint Base Balad.

ment, transportation, and maintenance. The service detachment's responsibilities include coordinating the delivery of all classes of supply to the battalion's 3 operational detachments bravo and 16 ODAs.

Service Detachment Organization

The service detachment has five sections: aerial delivery, food service, transportation, field maintenance, and electronic maintenance. The detachment provides direct sustainment support for the entire Special Forces battalion and its attached elements. In some cases, the support battalion of the Special

Forces group will augment the service detachment's mission. The mission load for the service detachment in a theater of operations depends on a number of factors, including the theater's level of development, the operating tempo of the operational detachments bravo and ODAs, and the availability of contract support.

The service detachment does not have an organic line-haul capability, so it must rely heavily on the theater support command, sustainment brigade, group support battalion, or contracted local-national support to get things moved. When the theater sup-



A Special Operations Task Force 52 convoy support team stages for movement in the International Zone in downtown Baghdad, Iraq.

port command, sustainment brigade, or group support battalion are in close geographic proximity to the SOTF, coordinating transportation assets is simple.

However, as the distance from these entities to the SOTF increases, coordinating movement becomes much more arduous. As the SOTF spreads out farther from its headquarters, the combined joint special operations task force headquarters, it becomes more important for the service detachments to be able to use alternate methods of procurement, such as P2 (conventional Army sustainment funds), P11 (sustainment funds for special operations), and sole-source contracting for logistics support.

Service Detachment Manning

Based on the fiscal year 2010 modified table of organization and equipment, a Special Forces battalion service detachment is authorized 42 Soldiers. The service detachment commander is designated as a functional area 90A logistics officer. The detachment sergeant is slotted as a military occupational specialty (MOS) 92Y4S, sergeant first class unit supply specialist, with a Special Forces additional skill identifier.

As primary logistics advisers to the battalion support company commander and first sergeant, the service detachment commander and detachment sergeant must be proficient in complex logistics functions. The service detachment includes 3 officers, 5 sergeants first class, 3 staff sergeants, and 31 Soldiers in the ranks of sergeant and below. Critical manning positions are seen throughout each section.

The service detachment mission is multifunctional. The unit has parachute riggers, small-arms repairmen, cooks, fuel handlers, water purification specialists, and various other skill sets that keep the gears of a Special Forces battalion moving.



A Special Operations Task Force 52 service detachment conducts redeployment operations at Baghdad International Airport.



Special Operations Task Force 52 service detachment Soldiers use a civilian contracted crane to download a 6,000-pound rough-terrain forklift at Forward Operating Base Zulu, Iraq.

These skill sets enable the battalion to complete its combat mission. Although most of the required skill sets are included in the current modified table of organization and equipment, it does have some glaring shortfalls.

The service detachment would be much more capable of accomplishing its mission if it were augmented with some MOS 88M wheeled vehicle operators and MOS 88N movement control specialists. Although the Special Forces battalion has one 88N assigned to the S-4, the battalion would be better served by having three or four 88Ns in the service detachment where all movement is coordinated. The constant deployments and movements of the Special Forces battalion brings the spotlight to those movement specialists. This increased capability would allow more streamlined processes for submitting time-phased deployment data and physically moving cargo to and from theaters of operations.

During Operation Iraqi Freedom 09-11, SOTF-52's service detachment provided critical sustainment support across all of southern Iraq. In addition to its core competencies, the detachment completed 12,500 miles of line-haul convoy support delivering

critical goods and supplies to the battalion's ODAs and to Navy SEAL (sea, air, and land) platoons.

The aerial delivery section moved 350 tons of equipment via sling-load operations. The transportation section coordinated for the movement of more than 500 pieces of equipment through the local central receiving and shipping point and movement control team. The food service section facilitated the acquisition of class I (subsistence) supplies for a dining facility that served 1,000 service members daily. The supply element of the service detachment turned in over \$10 million worth of excess property as part of the responsible draw-down of forces in Iraq.

All of these actions, although usually transparent to the warfighter, make a difference. The service detachment of the Special Forces battalion provides the battalion's leaders with a critical service that should never be overlooked.

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Why Should I Study Military History?

BY MAJOR JAMES J. GODFREY

Studying military history may not provide an exact blueprint for what to do in every situation. But the lessons learned from past experiences can encourage innovative thinking.

It is important that military professionals in today's Army study military history. Studying military history will not provide the military professional with an exact template on how to conduct warfare; however, I believe that it does offer opportunities to explore the thought processes and the decisions of commanders faced with difficult circumstances. When a leader is confronted with uncertainty, it is important that he be capable of creative thought and ingenuity to defeat the enemy.

This article will explore the relevance of studying military history for the modern military professional and the vital role logistics plays in ultimate success or failure on the battlefield. Specifically, it will discuss the use of the railroad and the lessons learned from the Civil War that can provide valuable lessons for today's logisticians.

The Genl. J. C. Robinson, a locomotive of the U.S. Military Railroad, builds up steam at the huge Union Army supply depot at City Point, Virginia. The Union Army's mastery of how to use railroads to support operations gave it an advantage over the Confederate armies.



The Lessons of the Past

Warfare requires innovative thinking and ingenuity. The enemy is always adapting to tactics used on the battlefield. It is important that the commander on the ground be perceptive and be able to apply critical thought not only to his actions but also to the enemy's responses.

As Jay Luvaas noted in his article, "Military History: Is It Still Practicable?" in the March 1982 issue of *Parameters*, during World War II the Germans used lessons learned from the western front and applied them unchanged in the battle against the Soviet Union. Later, a German general remarked, "Not only did this misapplication of experience influence the operational plan against Russia, it also contributed to the final disappointment." One can deduce that many factors influenced the lack of success of the same plan with a different enemy—factors that the commander on the ground did not take into consideration.

Many mission variables need to be considered when applying a lesson from history. Studying the events, situations, or circumstances facing the commander at

the time is what provides the true lessons. How does that commander use the terrain or the weather to his advantage? The thought process or the events that led to the decision are important to understand.

Napoleon studied history and made use of its lessons. His application of those lessons is evident in his actions in 1806, when his army was in Italy. He had with him a history of a campaign conducted in the same theater by the French Marshal Maillebois over half a century before. In both cases, the object was to separate the allies and beat them in detail. In both cases, the same passes through the Maritime Alps were used. And in both cases, the first objectives were the same.

History served Napoleon well not so much because it provided a model to follow but because it offered ways to capitalize on what

others before him had experienced. Napoleon saw the true benefit of studying history. He knew that he was on terrain that had been used to wage war in the past. If a commander is not well read or knowledgeable of events from the past, he may miss opportunities to use those lessons in the present. Napoleon capitalized on this concept in his campaign in Italy.

The Case of Railroads in the Civil War

As a logistician, I can learn a great deal from history. The process by which warfare has been sustained has changed drastically over the years. Armies no longer use animals with carts to transport supplies and troops across the battlefield. The pre-positioning of supplies and the ability to get those supplies stocked is vital to mission success. Applications of successful logistics can be found throughout history, as can the demise of armies unable to sustain their movements.

The use of the railroad during the American Civil War is an excellent example of using effective logistics to influence the outcome. The Union Army gained a significant advantage from its ability to capitalize on the use of railroads. In previous conflicts, the Army had to carry all that it would need for a campaign. The use of the railroad enabled the Union Army to carry more supplies and transport troops to designated locations.

The use of the railroad was not an easy process to master; conflicts had to be mitigated. The Union Army mastered this early on, and that success proved to be a tipping point for the successful employment of this critical asset. As Christopher R. Gabel observed in his study, "Railroad Generalship: Foundations of Civil War Strategy," published by the Combat Studies Institute in 1983, most railroads in the 1860s were still small-scale, local enterprises, so movements typically involved coordination among multiple corporate entities. In order to establish priority and still allow the railroads to make a profit, the U.S. Government enacted legislation guaranteeing military priorities and concluded an informal agreement with the railroads allowing them to turn a fair profit.

This act was important, but the brilliance of this arrangement came from employing railroad managers to oversee and synchronize railroad operations. The Union realized the importance of using individuals who had a vast knowledge of the system and what it could do when employed effectively. The effectiveness of this strategy was realized on 25 September 1863, when the Union Army moved the XI and XII Corps from Virginia to Tennessee. The transportation department of the Baltimore and Ohio Railroad, not the War Department, planned and coordinated with the five other civilian railroads involved.

The Confederates were not as successful in capitalizing on the opportunities the railroad offered. The

South did not assert itself as effectively as the North in establishing that the military had priority of movement. For most of the war, military traffic moved only at the discretion of civilian railroad managers. An example of the negative impact of this system was the support provided to General Robert E. Lee's Army of Northern Virginia. Lee's troops suffered from hunger because, even though they had a direct, 30-mile rail link to the national capital, where supplies were available, they were unable to get those supplies to the front.

During the Civil War, the railroad tended to restrict maneuver. Although the Army could move men and supplies in numbers that were unheard of before the use of the railroad, field armies tended to bunch up around their railheads. The new problem thus became secondary movement, and this was not taken into consideration.

The Union eventually defeated the Confederacy in large part because of its ability to manage the rail system to its advantage. The Union's ability to synchronize movements and coordinate efforts early in its use of the railroad was key to its success. The Confederates' inability to establish the priority of movements and then synchronize those efforts was their downfall. Successfully establishing logistics lines of effort is clearly evident when discussing the role of the railroad in the Civil War.

The use of the railroad is a valuable example to a logistician. The need to deconflict movement schedules, establish priorities, and understand the tactical picture are all applicable on today's battlefield.

The tactician can also learn a lesson from the use of the railroad in the Civil War. Logistics can affect operational reach, either by reinforcing it or compromising it.

These are a few examples of how understanding the reasons for decisions or actions made by leaders in the past can provide valuable lessons for today's military professional. History will not provide the military professional a playbook from which to conduct warfare but rather a lesson book that provides innovative solutions to complex problems. The military professional can analyze the context of the battle and the decisions that faced the commander on the ground at that time.

When history is used in this manner, it teaches the military professional how to think and not what to think. Ultimately, the commander needs to be capable of creative thought and ingenuity to defeat the enemy.

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Lessons Learned From the First Year of Activating a Brigade Support Battalion

BY LIEUTENANT COLONEL LEON G. PLUMMER AND MAJOR ERIC A. MCCOY

Many Army logisticians who have served since the start of Operations Enduring Freedom and Iraqi Freedom have observed firsthand the Army's challenge of growing capability to respond to a full spectrum of contingency operations. In order to increase dwell time and bring the Army into compliance with the Army Force Generation process, senior Army leaders decided to increase the number of brigade combat teams (BCTs) and support brigades in both the Active and Reserve components.

On 16 August 2009, our brigade, the 3d Infantry BCT (IBCT), 1st Armored Division, was activated at Fort Bliss, Texas. Many courses of action were discussed at the Army's strategic and operational levels concerning the unit's structure and what future missions it would undertake.

Although we were scheduled to become the Army's first unit equipped with Future Combat Systems (FCS), the senior leaders of our brigade focused on the organization being properly manned, equipped, and trained for full-spectrum operations so that we would be available to support any contingency mission. This was especially important because the 3d IBCT was one of the first newly activated units in recent history that did not deploy within a year of its activation, allowing senior Army leaders to observe the effectiveness of the Army Force Generation process as it was originally modeled for Active component units.

The following lessons learned were gathered from the senior leaders of the 125th Brigade Support Battalion (BSB) and are designed to educate logisticians on the challenges we experienced and the steps for mitigating these problems. These recommendations are meant to maximize the ability of logisticians to provide sustainment and force health protection support to the warfighter.

Supply Distribution Operations

After experiencing the challenges of activating the 3d IBCT, the distribution company gathered supply distribution lessons learned that may be helpful for future BCT activations.

Soldiers of B Company, 125th Brigade Support Battalion, pull parts from their forward repair system to repair a disabled vehicle. (Photo by CPT Jimmy Deer, 125th Brigade Support Battalion)

The first recommendation is to have valid Department of Defense activity address codes (DODAACs) in place 1 year before the effective date for standing up the unit. Second, the senior property book officer and supply support activity (SSA) senior warrant officer should arrive at the installation 9 months before the effective date of the unit's activation. Third, the SSA location should be identified and prepared for unit activation 6 months before the effective date.

When he arrived at Fort Bliss in January 2009 to serve as the interim 3d IBCT S-4, our distribution company commander quickly learned that the unit had not been assigned valid DODAACs to allow it to place orders for equipment. The 3d IBCT had an effective date of 14 August 2009. That meant the logisticians who were on the ground had only 8 months to prepare for the influx of materiel and personnel.

The senior property book officer started working on the issue of DODAACs in February, and the 3d IBCT was not issued a DODAAC until June. Once the



DODAACs were assigned, we learned that they were actually still in use by a reset unit. Therefore, we were on standby and could not order supplies and equipment until the reset unit's equipment cleared or we were given different DODAACs.

The 3d IBCT was allocated \$6 million to stand up the unit. However, with no way to order equipment or supplies, the logisticians on the ground could not prepare for the unit effective date. Temporary DODAACs were issued to the unit, but temporary DODAACs are only valid until 180 days prior to activation, and then the unit transitions to permanent DODAACs.

The 3d IBCT had no operating DODAACs, no computer systems for placing orders, and no SSA available to receive supplies. By the time the brigade had fought through the debate on whether or not central receiving at Fort Bliss could accommodate the flow of orders from an IBCT, the effective date had arrived. Based on this experience, units should ensure that the DODAAC is active 1 year before the effective date and that the senior property book officer and SSA warrant officers are on site no later than 9 months prior to the effective date.

SSA Operations

It is said that "logistics is the lifeblood of war." If that philosophy is true, then the SSA is the heart of any unit. Unfortunately, an SSA was not included in

the initial plans for the 3d IBCT. Eventually, the brigade planned to have an SSA built, but not until the end of 2011 or the beginning of 2012. The 3d IBCT would have to colocate with two existing SSAs in order to begin shipping and receiving procedures. Selecting an SSA site large enough to accommodate inbound cargo involved months of debate between the advance party and installation personnel.

The most important consideration was the security of the site. Because three SSAs were sharing the same building, fencing and memorandums of agreement were necessary. In addition to the shipping and receiving of supplies, the storage of the authorized stockage list (ASL) was a paramount issue for the SSA warrant officer. Because of the delay in selecting an SSA location and the inability to store any ASL that could be delivered, the ASL for the 3d IBCT did not arrive until nearly 8 months after the unit's formal activation.



Storage containers for the ASL were another challenge because the 3d IBCT was not within an immediate deployment window. The unit leaders drafted and submitted an operational needs statement to purchase the required containers, which arrived shortly before May 2010. To avoid this problem, the SSA warrant officer should be on the ground no less than 9 months before the unit's effective date, and effective infrastructure and supporting resources should be in place to accommodate early receipt of the ASL so that units can begin collective training at the first opportunity.

The 125th BSB's distribution company was the nexus for all logistics for the first 180 days after the brigade's effective date. In addition to acquiring an SSA location, requisitioning equipment, and securing onhand cargo, the distribution company provided direct support for the entire 3d IBCT so that the forward support companies (FSCs) had time to obtain the required manning and training.

Automation

The backbone of the BCT's Standard Army Management Information Systems (STAMISs) includes eight very small aperture terminals (VSATs) and the Combat Service Support Automated Information Systems Interface (CAISI). A VSAT is easy to install and provides the brigade's FSCs with Non-Secure Internet Protocol Router Network (NIPRNET) access anywhere in the world. The CAISI provides an extension of the local area network, enabling units to access the VSAT from up to 32 miles away.

During the STAMIS fielding, we realized that it is imperative that the operations (S-3), support operations, and sustainment automation support management office (SASMO) sections coordinate to deploy individual systems in the proper sequence. The new equipment fielding teams did an excellent job of handling our requests for fielding equipment in the proper order. Their experience in fielding these systems allowed the brigade to communicate the need for this order.

VSATs were fielded first to provide the NIPRNET connectivity that was needed for all the systems to be installed. With the VSATs in place, the Standard Army Retail Supply System (SARSS), which is the central point in the logistics network, could be installed. With the SARSS connected to the VSAT network, any logistics system that needed to interface with SARSS could now be installed.

With the SARSS installation complete, Property Book Unit Supply Enhanced (PBUSE) was installed and could be used to submit supply requests to the SARSS server. Close on the heels of PBUSE, the Standard Army Maintenance System Enhanced was fielded.

New equipment fielding was always accompanied by new equipment training. This training provided

support personnel and operators with a solid foundation in the fundamentals of supporting and operating the new equipment. Both classroom instruction and over-the-shoulder, on-the-job training were provided for the majority of the fielding. The over-the-shoulder training proved invaluable for both support personnel and operators, since problems or tasks that were not covered in class arose often.

The SASMO is the primary support section for all STAMIS equipment. This section comprises a signal warrant officer, computer technicians, materiel management specialists, and a supply specialist. This mixture of job specialties provides a broad range of logistics and signal abilities that allow the SASMO to support many logistics support functions.

One lesson learned in the SASMO section is the importance of slowing the pace of fielding when possible. One of the challenges of standing up a new BCT is that new personnel and equipment are flowing in simultaneously. This parallel flow does not work well when personnel skills must be matched with equipment; this is especially true in the case of SASMO duties since many Soldiers may not be fully trained on troubleshooting STAMIS systems. Given time to identify the true skill sets of their personnel, leaders can put them in training that better suits each individual's capabilities.

Slowing the fielding process would allow not only for better training of personnel but also for better selection of support personnel for these systems. One of the current problems that the Army faces is that the SASMO section, although not new to the Army, is new to most Soldiers. With more time to identify the more experienced signal and logistics troops, the SASMO could be staffed with Soldiers who can support the STAMIS architecture with minimal training. The fielding process belongs to the unit; the emphasis should not be put on speed but on the ability of the personnel to field and employ the equipment.

The STAMIS network comprises many systems that together support a complex but intuitive logistics architecture. With the correct fielding schedule and personnel, the logistics network can be installed quickly and will function with minimal maintenance or downtime. Training and personnel are the keys to installing and maintaining a quality logistics network. Proper coordination with all players involved in fielding and training for equipment is important to making operators and support personnel successful in the operation of the BCT's logistics system.

Force Health Protection

The brigade support medical company in the BSB provides medical support and supplies for the 3d IBCT. Based on a lack of healthcare providers and the influx of new personnel to the brigade, a conscious decision was made to consolidate resources and personnel to

staff a consolidated brigade aid station and operate a consolidated combat lifesaver academy.

Executing these courses of action required much from our leaders in terms of planning and resources. Despite initial difficulties, the consolidated aid station has greatly increased the quality of care that Soldiers receive, reduced patient load at the troop medical clinic, and helped to keep Soldiers available for training.

Medical care is a necessity for all Soldiers, and the aid station must be in close proximity for sick call so those who do not have transportation will be able to go without any hassles. The building selected as the aid station must have Internet connectivity so that the healthcare providers will be able to log patients into the medical system and input prescriptions from the aid station. The building also needs to be large enough to protect patient privacy.

These were initial challenges based on the capabilities of the transient facilities that our BCT was initially using. All the medics in the brigade should be included in the 90-day rotation plan to work at the consolidated aid station so that the patient workload is evenly distributed among all medics in the brigade. Adequate class VIII (medical materiel) supplies are needed, including thermometers, pulse oximeters, stethoscopes, blood pressure cuffs, and other supplies that the physician assistant deems necessary for use at the aid station.

The stand-up costs for medical supplies should be built into the activation budgets of BCTs so that adequate capability is in place at the effective date. The brigade medical supply section must have an established account designated only for class VIII. All transactions should go through that account, and all orders for the brigade should go through the medical supply warehouse and authorized vendors. The medical supply processes need to be built earlier into the advance party process so that proper oversight procedures can be in place before unit activation.

A tracking system should be developed early to ensure proper ordering, receipt, issue, and accountability of medical supplies. A standing operating procedure must be published in order for the units to know the proper procedure for ordering medical supplies.

Facilities and technology must be considered by installation planners, especially when building new units on installations with limited permanent infrastructure. Adequate space is required in the brigade medical supply warehouse for storing medical supplies. Activated computer systems need to be in place in the warehouse to track orders. Shelves and pallets must be placed in the warehouse according to medical supply regulations.

The Army Combat Lifesaver Program

The Army's combat lifesaver (CLS) program trains nonmedical personnel on lifesaving skills to improve their chances of saving fellow Soldiers on the battle-

A Soldier from C Company, 125th Brigade Support Battalion, performs a chest compression on an infantry Soldier during a combat testing lane for the Expert Field Medical Badge. (Photo by SGT Roger Rydell Daniels, 16th Mobile Public Affairs Detachment)

field. The course teaches the basic skills needed to sustain life in an emergency situation before a wounded Soldier can be evacuated to a medical treatment facility. The CLS certification is 40 hours and includes classroom instruction and hands-on training.

In the classroom, the CLS students are instructed on basic first aid theory, advanced lifesaving measures, and the reasons behind giving initial care on the battlefield. If the Soldiers pass a written test, they will be evaluated in the second part of the class, which focuses on hands-on skills in the field. In the field, tactical combat casualty care is stressed and includes care under fire, tactical field care, and evacuation of a combat casualty.

The 3d IBCT's CLS Academy cadre learned two important lessons when they established their program. The first is to have dedicated facilities with audiovisual capabilities for the duration of training. The second is to secure land, ammunition, and training resources to support the field portion of the course.

Official CLS books, which are ordered from Fort Sam Houston, Texas, take about 30 days to arrive, so units should order them early in the advance party process. Advance party personnel should be qualified as range officers-in-charge and range safety officers early on in the activation process to ensure that training is not hindered by noncompliance with post range regulations.

Field Maintenance Operations

One of the most significant challenges our maintenance shops had to deal with was the quality of facilities they initially occupied. This was especially true with our service and recovery, communications and electronics (C&E), general support equipment, field maintenance, and armament shops, which had issues with facility infrastructure, special tools, and senior personnel influx. The following are examples of issues we encountered or had to overcome in order to make our mission as successful as possible using the resources and facilities available to us.

The motor pool allocated for our maintenance operations required more space and tighter security than were available at the time the IBCT activated. The installation was in the process of building our permanent brigade facilities; however, we had to occupy transient facilities in the interim.

The advance party must have adequate expertise in the logistics requirements of the BSB in order to establish semipermanent infrastructure that meets the unit's needs. Our motor pool had too few cages to store tools,



parts, and general equipment separately. The cage our field maintenance section had for parts was also used to store other equipment. And our clamshell facility's doors locked, but the facility could still be entered through the retractable door.

Work orders for better physical security measures took a long time to start and complete, including those for our C&E facility. Over \$140,000 worth of physical security upgrades still needed to be started by the Department of Public Works in order for us to be able to fully support the brigade.

We worked to ensure that the C&E facility was in compliance with regulations and local physical security demands. To emplace a C&E shop in a semipermanent facility, several requirements need to be met, including reinforcing ceiling and walls, placing bars on windows, installing an intrusion detection system, emplacing restriction bars on air-conditioning ducts, and securing roof access control. The work orders on these requests take approximately 15 to 24 months to complete.

Other needed upgrades included upgrading the amperage of each power outlet, installing more power outlets near workstations, and increasing the square footage of the shop from 1,050 to at least 2,100.

The lack of storage containers made it difficult to properly secure new equipment as it arrived. This was compounded by the lack of DODAACs for the unit, which limited our ability to order storage containers



Water purification specialists with A Company, 125th Brigade Support Battalion, conduct initial water testing as part of the company's training. (Photo by David Poe, Fort Bliss Public Affairs Office)

until the beginning of fiscal year 2010, even though we activated in fiscal year 2009.

Likewise, new equipment arrivals did not coincide with personnel inflow or the training schedule of the BCT. Some of the company's maintenance equipment, like our toolboxes, did not arrive until later in the fielding process. The ideal time for the arrival of toolboxes and needed maintenance equipment (technical manuals and safety equipment) would be before any of the MTOE [modified table of organization and equipment] equipment requiring maintenance arrives at the unit.

Moreover, our MTOE did not reflect the critical repair equipment needed to support an IBCT, such as night-vision special tools, storage containers, and distribution boxes. We were unable to submit an operational needs statement for these and other items until 365 days before an operational deployment.

The specialty shops' MTOEs are often missing the personnel and equipment required to maintain some of the brigade's specialized communications equipment. Including them on the MTOE requires earlier identification of needed commercial maintenance equipment. New equipment training is also required so that maintainers have the proper skill sets to use the equipment before the start of collective training.

At the time of its activation, the 3d IBCT had less than a dozen vehicles, over 250 Soldiers operating out of 2 buildings, and no motor pool, SSA, or aid station. In less than a year, we organized units, established the logistics footprint of the brigade, received most of our required equipment, established command and support relationships between FSCs and their supported maneuver battalions, and began collective training.

Our culminating event was a brigade-level field training exercise in June. During this exercise, our battalion performed exceptionally over the course of 21 days in a

field environment where the daily average temperature exceeded 100 degrees. We pushed over 12,600 meals, 100,000 pounds of ice, 40,000 gallons of fuel, and 60,000 rounds of live and blank small-arms ammunition and provided maintenance, transportation, and medical support to over 2,600 personnel. During a 96-hour brigade force-on-force exercise, we relocated the brigade support area and supported maneuver elements that were as far as 30 kilometers away.

The lessons learned over the last year of our activation have been remarkably educational for the officers, noncommissioned officers, and Soldiers of the 125th BSB. We acknowledge that while we have traveled far since the early days of our BCT advance party's operation at Fort Bliss, our unit still has a long journey ahead of us as we continue collective training, transition to being the first FCS-equipped BCT, and ultimately enter the force-available pool. However, as things continue to change in today's dynamic operating environment, we hope that others can benefit from our experiences, avoid some of the challenges we encountered, and find opportunities for excellence.

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Why Logisticians Fail at Knowledge Management

BY MAJOR JIM BUNYAK

Ensuring that knowledge products are relevant, accurate, timely, and usable to commanders and decisionmakers will lead to unit success.

You are the senior logistician in the command post this morning. It is 0800, and you are about to brief the commander in his battle update brief. You have been preparing for the brief since 0600 because the slides were due to the battle captain by 0700. You get up to brief the commander and start spouting out numbers and figures. “We have 100,000 gallons of JP8 and 50 pallets of bottled water. Ammo is green. We are expecting a push from the sustainment brigade later tonight. Our operational readiness rate is 87 percent,” and on, and on, and on.

You wrap up your briefing, and you feel pretty good about what you told the boss; after all, you pulled the data from the Battle Command Sustainment Support System and verified it in the logistics status report. Surely it was good data, but therein lies the problem: It was just a bunch of data.

Your commander sits back in his chair and says, “So what?” You have just failed your commander. If a staff officer briefs the commander and the commander must ask a question either for clarification or relevance, the staff officer has failed in his job.

Making Knowledge Relevant

Logisticians notoriously neglect knowledge management (KM), and the situation described above is just one example of why. We sustainers are faced with more raw data than any other staff officer, and because of that, we often break the most basic principle of KM: ensuring that knowledge products are relevant, accurate, timely, and usable to commanders and decisionmakers.

Before briefing commanders or providing logistics data to the decisionmakers, logisticians must analyze and filter the data and information and turn it into knowledge for the commander. I Corps personnel recently addressed this issue in their KM plan. They recommended analyzing information based on seven information characteristics before briefing commanders or decisionmakers. Those seven characteristics are accuracy, relevance, timeliness, usability, completeness, brevity, and security.

Sustainers must take the infinite amount of data they receive and filter it using these seven characteristics. Only after the data are filtered, analyzed, and

packaged correctly should the information be processed and presented to the commander.

One might argue that sustainers do not have time to analyze all of the logistics data they are faced with and that their commander wants information as soon as it is available. I recommend asking the commander or decisionmaker, “Which do you prefer: information now or knowledge later?”

During the 5th annual Army Operational Knowledge Management Conference, Dr. Mark Nissen put it another way. He used a pizza analogy: Does the commander want a bad pizza delivered fast or a better pizza that takes a little longer to prepare and deliver? Most commanders will want both. Commanders want information now, and they want it to be right. This makes our job even more difficult, but through the use of effective KM processes, sustainers can meet the commander’s requirements.

Sustainers can start by speaking the commander’s language. Logisticians tend to speak differently than their commanders, especially in maneuver and functional brigades. While we tend to talk of gallons, days of supply, and percentages, the maneuver and functional brigade commanders speak of offensive and defensive operations and the number of missions.

Sustainers must take their logistics data and information and put it in terms that the commander can apply immediately. For example, instead of saying, “Sir, we are green on ammunition, and we have 89 percent on hand,” the sustainer should say, “Sir, with the current amount of ammunition on hand, we can sustain 30 missions.” It is the same data and information, but it is spoken in the commander’s language—how the commodity affects missions. This may seem simple, but the way you present the information is almost as important as the information itself.

Sharing Knowledge

One of the seven principles of KM is to focus on sharing knowledge. Field Manual (FM) 6–01.1, Knowledge Management Section, says that “knowledge shared is power.” Sustainers do a relatively good job of sharing information and knowledge within the logistics community. Where sustainers fail to share information and knowledge is across the other warfighting functions.

The brigade S-4 is synchronized with the brigade support battalion's (BSB's) support operations officer (SPO), and the BSB SPO is synchronized with the sustainment brigade SPO. But the brigade's logisticians are seldom fully integrated and synchronized with the movement and maneuver cell or other staff sections. By using several KM tools, sustainers can better synchronize logistics across all warfighting functions.

Running estimates. Sustainers must have simple but dynamic running estimates. Using a Microsoft PowerPoint slide with an imbedded Excel spreadsheet is common practice, but that slide is hardly dynamic, and quite frankly, it is not a running estimate. Now, I am not saying that running estimates need to be real time, but according to FM 3-0, Operations, they need to be a continuous assessment. As soon as data are taken from the Excel spreadsheet and pasted into a slide, the information is static.

Sustainers should leverage technology to make their running estimates more relevant. The Command Post of the Future (CPOF) and SharePoint offer technology solutions for running estimates. When assessing running estimates, analyze the time and effort it takes to prepare, update, and share those estimates. If you or your subordinates are spending excessive time and effort maintaining these, you should look for more efficient and effective solutions. Furthermore, if it is difficult or impossible to share your information, then it is of little use.

Logistics synchronization meeting. Once you have developed your running estimates, those estimates become the foundation for your logistics synchronization (log sync) meeting or your sustainment working group. Few maneuver and functional brigades effectively use the log sync meeting. Most brigades

The quad chart is a best practice for developing the content, structure, and composition of your meetings and working groups.

Legend

BSB = Brigade support battalion
 SASMO = Sustainment automation support management office
 FSC = Forward support company
 PBO = Property book office
 SPO = Support operations officer
 XO = Executive officer

either conduct their meeting with only logisticians (excluding the other staff sections or warfighting functions), or they do not conduct a log sync meeting at all.

The log sync meeting is the key to integrating sustainment and sharing logistics information and knowledge. In a deployed theater, time, distance, and location may make it difficult to conduct a log sync meeting, but once again, sustainers can leverage technology to help facilitate the meeting. Virtual meetings are common and very effective. Regardless of how the meeting is held, its contents are most important.

When developing your log sync meeting, start with the "7-minute drill" to justify the need for the meeting. It is called the 7-minute drill because you have 7 minutes or less to justify to your boss the need for the meeting. By focusing on the outputs of the meeting, you can show the command the value of the log sync meeting. Once you have completed the 7-minute drill and added the log sync meeting to the battle rhythm, develop the content and structure of the meeting.

Quad charts. A quad chart is an excellent tool to ensure that your log sync meeting and other meetings, working groups, and boards are efficient. The quad chart is not a new product, but it works well. Operations Group Foxtrot and the Battle Command Training Program recognize the quad chart as a best practice when developing the content, structure, and composition of your meetings and working groups.

Logistics Synchronization Meeting			
<u>Purpose, Frequency, Duration, Location</u>		<u>Composition</u>	
Purpose: Synchronize logistics throughout the brigade and identify existing and future logistics requirements		Staff Proponent: BSB SPO	
Frequency: Daily		Chairman: Chief of staff	
Duration: Less than 1 hour		Attendees: Brigade XO, G-3 representative, S-4, S-1, FSC commanders, BSB XO, BSB SPO, S-2, PBO, and representatives for transportation, supply, services, ammunition, distribution, and other commodities	
Location: Brigade and BSB			
<u>Products</u>		<u>Agenda</u>	
<u>Input:</u>		Roll call (SPO)	
• Combat Power		Enemy situation (S-2)	
• Direct support stock status		Upcoming mission (S-3)	
• Logistics requirements		Current log status (SPO)	
• Current operations		Sustainment next 24 to 72 hours	
• Running estimates		Convoys	
<u>Output:</u>		SASMO	
• Logistics synchronization matrix		Issues	
• Sustainment graphics			
• Updated common operational picture			
• Updated running estimates			
• Fragmentary Order			

The quad chart clearly displays the purpose, frequency, duration, and location in one quadrant. The inputs and outputs are displayed in another quadrant and, equally important, the attendees are listed in a third quadrant. In the log sync quad chart below, the attendees include representatives from the operations and intelligence sections. The attendance of these people is critical to integrating sustainers into the operations. The last quadrant simply shows the agenda for the log sync meeting. Notice that various staff sections are involved and facilitate the sharing of information across the brigade.

Improving KM Practices

Perhaps the single most important means of sharing information and gaining situational understanding is the common operational picture (COP), which sustainers sometimes neglect. Logisticians feel that they need to have their own logistics COP (LCOP). FM 3-0 says that the COP is a single display of relevant information that is shared by more than one command. LCOP is never mentioned in Army doctrine, and sustainers must recognize that there is only one COP.

We must incorporate logistics information into the unit's COP, which is easy to do with CPOF and SharePoint. Sustainers must take the information from their "LCOP" and create views and displays within CPOF and SharePoint to display the relevant logistics information to the commander, other staff sections, and subordinate units. Doing this instantly gives commanders and decisionmakers the sustainment situational awareness they require.

Another key KM principle is to foster learning. Sustainers must continue to be a learning community. We do this by capturing lessons learned and passing them on to our replacements or other units. This is an area where we could all improve. All too often, units or individuals change something just for the sake of change.

For example, in a recent initial-impression report from III Corps, it was noted that the corps "made a conscious decision to not use several of the automated tools developed by the previous staff, based on the lack of predeployment training on the tools in use in theater. . . . In retrospect, several changes were reversed after learning that the previous unit's methods worked best." If we do not learn from previous units and individuals, we will continue to learn the same lessons over and over again.

It is absolutely critical that sustainers capture lessons learned and share them. The Army has numerous means to share these lessons. The Battle Command Knowledge System (BCKS) is one way to share your experiences and best practices, and every sustainer should be an active member of the SustainNet forum, which is an excellent place to find logistics information, products, and best practices.

But do not allow readily available lessons learned to replace individual innovation. You will find numerous standing operating procedures within BCKS, but do not fall into the trap of taking another unit's product and assuming that it fits your organization perfectly. These products should be your foundation, but continue to adapt and improve them based on your tacit knowledge.

In the current operational environment, knowledge transfer is critical. Effective KM allows us to learn more, faster. For example, almost everyone has participated in some sort of relief in place/transfer of authority (RIP/TOA), whether it was in Iraq, Afghanistan, Kuwait, or somewhere else. Normally, the incoming sustainer has done some research before the RIP/TOA. This research is done by email, telephone calls, and maybe even a predeployment site survey.

Once an individual deploys, he has less than a month to learn everything he can from the outgoing officers and Soldiers. At the end of those short weeks, the incoming individual probably feels comfortable in his understanding of his duties and responsibilities.

As the new guy gets further into his tour and the last guy goes home, the new guy almost assuredly realizes that he has a lot more to do than the last guy showed him. Why is this? Was the last guy just in a hurry to go home? Probably, but I doubt he intentionally ignored questions. The breakdown most likely can be traced back to a lack of KM and, in particular, knowledge transfer, both tacit and explicit.

Retired General John W. Hendrix summed up the importance of KM. As he addressed a functional brigade at its battle command seminar, he said, "It [KM] is a laborious process, but if you don't do it, it is an accident if this brigade works well . . . If you do not do this process, it is an accident if this brigade functions properly." He continues, "We are not an institution that accepts accidental decisionmaking. Knowledge management is the process by which we make it [decisionmaking] logical."

Sustainers provide critical information in this decisionmaking process. We cannot let ourselves get consumed by data and neglect our KM responsibilities. By analyzing our data and information, speaking the commander's language, sharing our knowledge, and capturing and transferring our lessons learned, we can ensure that it is not an accident when our unit succeeds.

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Radio Frequency Identification Tags in Modern Distribution Processes

BY PATRICIA KELLY AND CATHERINE ROBERTELLO

The military services and the Defense Logistics Agency (DLA) have invested millions in radio-frequency identification (RFID) tags and infrastructure since 1996. The Department of Defense (DOD) has aimed most of this investment at producing in-transit visibility (ITV) information, some of which is used to make such decisions as whether or not to order more supplies, redirect cargo delayed en route, or get materials-handling equipment and download teams ready. In June 2007, DOD selected RFID technology to help track assets across its supply chain.

Using RFID to modernize logistics processes—and not just to gather ITV information—could result in substantial improvements in distribution operations. We propose that DOD could improve its existing RFID infrastructure and investment by adding RFID to daily distribution processes.

Focus on the Process

More than 3 million active RFID tags are in circulation today in the military distribution system, with approximately 3,100 tag-reader devices in place in Kuwait, Iraq, Pakistan, and Afghanistan. DOD customers, especially the Army, could start using that investment not only to make better use of the ITV data but also to reap the greater benefits of process improvements in supply, inventory management, and transportation. That is where DOD would get the big payoff from RFID.

DOD urgently needs total ITV, but what it needs more are the efficient distribution processes that RFID-enabled information systems can support. ITV data would be collected as a transaction byproduct. DOD logisticians have been slow to embrace the process efficiencies that RFID tags offer. By using just the current RFID infrastructure to support transactions in automated systems, DOD can achieve valuable changes in distribution business processes with little incremental cost.

The Framework Is There

The Army, for example, has already made large investments to establish theater ITV by purchasing millions of RFID tags and establishing thousands of RFID tag interrogator (reader) sites, not only at distribution activities but also at major nodes along routes.

The tags cost around \$60 each. Interrogator equipment can cost between \$2,000 and \$20,000 per site, plus \$75 an hour for the field service representatives to maintain the equipment.

As a result of this investment, customers in the military services and joint operations centers have the advantage of an already-established RFID network. They have attained excellent ITV coverage in the Iraq areas of operations and good coverage in and around Afghanistan. The radio frequency ITV (RF-ITV) network has been invaluable to distribution and deployment ITV in these two theaters.

Office of the Secretary of Defense policy states that all theater-bound shipments will be equipped with RFID tags to help track cargo. Both the U.S. Central Command (CENTCOM) and the Army G-4 directed that shippers affix RFID-enabled container-intrusion-detection devices to unit-move equipment headed to the CENTCOM area of responsibility to help prevent pilferage.

For years, DOD has used RFID to track U.S.-originating shipments as they pass chokepoints along key routes, through strategic ports, and along lines of communication into the battlespace. RFID data can be correlated with information originating in systems used in distribution processes, giving commanders more complete information on the status of the shipments. The information is available in a number of different systems used by the supply technician checking on orders, the movement specialist assembling a convoy, or the controllers monitoring force flow from a far-away headquarters.

ITV Data Could Improve Distribution

The most fundamental bit of data that an RFID tag can provide is a time stamp for a supply-chain event such as a transportation closeout, which confirms that an item has arrived at its destination. Unfortunately, a transportation closeout rarely takes place and no one initiates a trace when a closeout does not take place by an estimated arrival date. In fact, the lack of a transportation closeout event is so common that its occurrence generally does not raise concerns anywhere in the DOD supply chain. Using RFID tags to generate a closeout notice could result in two significant supply chain improvements: better use of transportation assets and lower supply costs.

Tagging Needs Discipline

DOD has found that the information gathered from tags does not typically provide a complete picture. In December 2009, the Product Manager for Joint-Automatic Identification Technology (PM J-AIT) published the results of its 2009 RFID site analysis.

PM J-AIT operates the DOD global RF-ITV system, infrastructure, and database, which aggregates RFID tag data for all customers. The interrogator reads of RFID tags provide simple visibility data: item X passed location Y at date and time Z. In the 2009 PM J-AIT sample, only 60 percent of tags stayed with their cargo from origin to final destination. Of the 60 percent of tags that did arrive, only 16 percent created a transportation closeout in the RF-ITV system. From an ITV perspective, these are disappointing statistics.

The RFID tag writing and reading depend on manual processes—the “human touches” that allow errors to enter the system. Inaccurate information starts at the shipping origin. People can make mistakes when they manually enter data at the onset of movement; tag writers sometimes enter invalid consignees on the tags. Personnel do not always set up interrogators at key nodes or chokepoint locations. System administrators can forget to register an interrogator that allows the RF-ITV server to recognize the location where interrogators are reading tags. As a result, RFID tags and the infrastructure in place do not always provide accurate ITV information.

For DOD to achieve a higher percentage of tags successfully triggering accurate ITV feeds, the RFID network will need to consider “human-factor corrective measures” to figure out how to improve tag data and the reader-network setups. Consistent accuracy is fundamental to DOD’s ability to rely on RFID to support transportation-related decisions and its ability to use RFID for more complex supply chain business processes.

Use RFID in Systems That Support Processes

The more than 3 million RFID tags already circulating through DOD distribution networks should be a factor in improving business processes as they perform their ITV function. Once the tags are integrated with the transactions and information in automated distribution systems, the investment in tags and infrastructure could provide more significant process improvement dividends.

What will integrating RFID technology with a system provide? It can reduce manual data entry, which produces a decrease in errors and also an increase in efficiency because automatic reading saves time. Today’s RFID technology allows automated correlation of information, such as linking tag identification to

inventory, ordering, or shipment data. This technology can be used to eliminate manual steps in a business process and reduce the time spent searching for information, human error in gathering information, and the numbers of screens for completing tasks. It can also allow tasks to be completed automatically and enable an automatic transaction.

Using Passive RFID in Process Improvement

As DOD finds the right path to a synchronized, integrated use of RFID throughout the supply chain, some customers are enjoying the benefits of successful, small-scale implementations. Implementing RFID use across DOD logistics all at one time is impossible. However, these projects are producing tangible benefits and demonstrating uses that break barriers, help others to see the value of RFID, and identify technical solutions that can be applied across the enterprise.

These solutions may exist in passive RFID experiments. Passive RFID uses less expensive tags that work by waiting for an active tag (or some other signal) to trigger a limited-range radio transmission. Each of the services has invested in passive RFID equipment, and three of them are showing particular promise in how they are implementing this technology. The Navy has shown the potential for a positive return on these investments. The Air Force is using passive RFID to increase its control of special items. And the Marine Corps is starting to use passive RFID to support receipt of supplies at its large bases.

Navy. The Navy, in partnership with DLA, is taking advantage of its RFID investments to improve business processes in Hawaii. Navy organizations placed RFID readers at receiving points and warehouse doors throughout their supply chain in Hawaii, and they established interfaces with distribution systems. In addition to using the RFID-to-Automatic Information System (AIS) interface to automate their business processes, the Navy made each tag-read transaction visible to its customers.

Because they are satisfied with the progress of these improvements to shore-based operations, Navy ordnance and supply experts are seeking approval to establish

This photo shows an Early Entry Deployment Support Kit—a radio-frequency identification interrogator—that is positioned at a chokepoint for passing cargo and equipment.



RFID capability on vessels to support their onboard supply processes. The Navy's primary hurdle for getting onboard RFID has been the complexity of the hazards of electromagnetic radiation to ordnance (HERO). More analysis must be done, but recent testing shows passive RFID technology can be used effectively and safely within Navy HERO limits. This step, if adopted, will bring detailed asset visibility to a very difficult environment—shipboard supply.

Air Force. The Air Force is using RFID technology not only to improve its business processes but also to add rigor to the inventory management of sensitive items such as nuclear weapons-related materiel. Air Force inventory experts are using the technology to capitalize on the time and effort invested in individual item management by using passive RFID tags.

In addition to requiring two-person identification and documentation on each item, the Air Force is using passive RFID to help with intensive item management inventory requirements. Using a handheld terminal, employees can complete an inventory of an entire warehouse within minutes—usually the time it takes to walk up and down the aisles. Tags are also being used to identify when items are moved from one area to another inside a facility, between separate facilities, or between installations. The system provides an alert when items are not received by a receiving installation by the expected delivery date.

After establishing the inventory capabilities for nuclear weapons-related materiel, the Air Force will be able to expand its use of the equipment to include tagging and tracking the movement of all supply items into and out of the five selected installations.

Marine Corps. The Marine Corps has equipped each of its main operating bases with the capability to read passive RFID on items shipped from DLA and use the information to document receiving and on-base deliveries. Once distribution managers complete the integration with their information systems, the Marine Corps expects to reduce errors and increase efficiency by automating processes that are currently being completed by hand.

RFID in the Supply Receipt Process

DLA provides item-level tagging and rolls up content-level information on the tags it affixes to intermodal shipping containers. Many of its prime vendors do the same. Much of industry's supply chain has shifted to the practice of using "trusted vendors" to eliminate costly item-level hands-on piece counts at receiving points. Assuming the military services adopt this philosophy, military supply facilities could download a DLA tag's data file to automatically update transportation closeout and inventory records at receiving points.

The Army's RFID-triggered transportation closeouts could be documented in their transportation business system and routed to a database at the Army Materiel

Command's Logistics Support Activity. To support Army supply receipt with an RFID-triggered inventory update, the Standard Army Retail Supply System (SARSS) would simply need to accept an automated file receipt from an RFID tag. For arriving containers that an activity's supply personnel do not immediately unload, SARSS could allow users to designate that container as a storage location at the supply facility. This change would eliminate a recurrence of the Iraq and Afghanistan theaters' asset visibility gap for the many supplies that arrived at a supply node but did not move quickly from an intermodal container onto an inventory record.

Is It Time for Inventory Policy Changes?

The services have policy reasons for requiring people to do supply-receipt piece counts, but a business case could be made for limiting these manual counts to high-value items. To transition to this inventory process change, the services could develop reasonable rules that focus manual processes on high-dollar or critical items and rely on RFID tag-supported inventory updates for low-cost items. This would require DOD to shift from the existing policy that requires 100-percent inventory accuracy at any cost for every item. In its place, DOD would need to establish a new policy that relies on periodic random counts for deliveries from trusted vendors or simply uses packing list data for item counts for most categories of items.

DOD has already made extensive RFID tag and infrastructure investments. A higher return on these investments comes from instilling discipline in all tag-associated functions and then integrating tag reads with the automated systems supporting DOD's supply chain processes. The cost of delaying these changes is great. Facing an immediate need to reduce overhead and find efficiencies, DOD now has a real opportunity to get more value out of its RFID infrastructure—in more accurate ITV with better supply chain and distribution operations.

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CATHERINE ROBERTELLO IS A SENIOR CONSULTANT WITH LMI, PROVIDING SUPPORT TO THE OFFICE OF THE SECRETARY OF DEFENSE, SUPPLY CHAIN INTEGRATION, ON SUPPLY-CHAIN POLICY. SHE IS AN EXPERT IN THEATER DISTRIBUTION, SUPPLY-CHAIN, AND LOGISTICS PROCESSES SUPPORTED BY AUTOMATION SYSTEMS, INCLUDING AUTOMATIC INFORMATION TECHNOLOGY AND ASSET VISIBILITY SYSTEMS. SHE HOLDS A B.A. DEGREE FROM GEORGE MASON UNIVERSITY AND AN M.S. DEGREE IN TRANSPORTATION AND LOGISTICS FROM THE AIR FORCE INSTITUTE OF TECHNOLOGY.

Retooling Leader Development in the Financial Management School

BY DR. DENNIS K. DAVIS

Achieving operational adaptability—the key to success in the 21st century environment—requires Army leaders who can think critically, are comfortable with ambiguity and decentralization, demonstrate a willingness to take prudent risk, and can adjust rapidly when needed. They must be able to handle hybrid threats and conduct full-spectrum operations, and they must be proficient in the latest technology and capable of melding it with their basic combat and occupational specialty skills.

Equipping our forces with the competencies that match today's complex, ambiguous, and multithreat operating conditions ultimately depends on the Army's ability to form and execute a viable leader development program. The Army Leader Development Strategy (ALDS) for a 21st Century Army, released at the end of 2009, advocates a balanced approach to the three pillars of leader development—training, education, and experience—through a deliberate, continuous, sequential, and progressive process. The Financial Management School at the Soldier Support Institute at Fort Jackson, South Carolina, is cognizant of the Army's needs and the ALDS blueprint and is revamping and enhancing its leader development efforts accordingly.

Experience, Education, and Training

Among the most important changes, the Financial Management School has revised the career maps for financial management (FM) officers and noncommissioned officers. While it is possible for FM Soldiers to be successful by tracking in a single core function, FM leaders believe it is highly important that FM Soldiers acquire nearly equal amounts of finance operations and resource management experience. For officers, time in command also remains central to career development, although the specific assignment matters little.

The career maps strongly encourage education as well, particularly outside of the Army sphere. Certifications, such as a Certified Defense Financial Manager or Certified Government Financial Manager, graduate and postgraduate degrees, and training with industry are key to expanding the FM Soldier's experience base and sharpening his professional skills.

The Financial Management School also is revamping its programs of instruction to reflect the requirements

of the current environment. In accordance with the new general guiding principles, the school is more frequently employing the experiential learning model in a small-group-instruction setting. This allows students to serve as assistant instructors and share their knowledge and firsthand experiences with their peers. The school is also integrating active-based and problem-based learning methods, which use the pattern of problem, plan, test, and reflect. Early results indicate that this methodology produces better comprehension.

The Financial Management School is seeking a better balance between “training” and “education.” Training focuses on equipping the student with specific skills that enable him to perform specific tasks for which success, failure, and completion are clearly measurable. Education is broader; it introduces the student to general, fundamental concepts and the practice of critical thinking, both of which are essential in today's unconventional operational environment.

In the rapidly evolving conditions of Iraq and Afghanistan, for example, Soldiers have encountered situations that were not part of their training in either the schoolhouse or the unit. In these instances, their ability to use critical thinking to solve a problem, as opposed to trying to apply a pat solution or procedure, greatly increases their chance of success.

Courses That Reflect Conditions on the Ground

The Financial Management School is adapting course materials as well. Operations in Iraq and Afghanistan have clearly demonstrated the potential of money as a “weapon system”—that is, money as a warfighting tool that is equally essential to achieving tactical and strategic objectives as a Stryker vehicle or a Hellfire missile. Where civil society and the economy have been severely damaged or completely destroyed, injecting money through public works projects rebuilds the basic infrastructure required for daily life to flourish (such as roads, schools, sanitation, power, and medical facilities) and helps to establish trust with the local populace. As projects create jobs, directly or indirectly, cash flows into local people's pockets, kick-starting the economy and providing an income alternative to illegal or enemy activity.

U.S. forces have primarily used the Commander's Emergency Response Program (CERP) to leverage the power of financial resources. To ensure that FM Soldiers are prepared to help commanders "deploy" this important weapon as soon as they enter an area of operations, the Financial Management School curriculum now provides in-depth CERP instruction, including information on legal limitations and the proper administration of funds.

The Financial Management School also is working with the private sector to develop a banking course. In Iraq and Afghanistan, Soldiers have taken a significant role in building banking systems, which are vital to a modern, thriving nation but were absent in both countries. The school intends to expand the Army's training-with-industry program in banking.

Iraq and Afghanistan have clearly demonstrated the importance of understanding regional customs and culture, both in terms of fighting the enemy and winning the support of local civilians. As part of the Army's Culture and Foreign Language Strategy, the Financial Management School added a cultural adviser to the staff in June 2010.

The adviser is a subject-matter expert on Southwest Asia (which includes Saudi Arabia, Yemen, the United Arab Emirates, Oman, Qatar, Bahrain, Kuwait, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Afghanistan, and Pakistan) and currently provides cultural awareness instruction to the Basic Officer Leader Course and the Captains' Career Course. The school intends to expand cultural and foreign language initiatives and products for students, sharpening the program each successive session.

As with every other Soldier, financial managers must be ready for the physical conditions on the ground. The Financial Management School's curriculum therefore includes Virtual Battle Space 2 (VBS2). A game-based training platform, VBS2 helps Soldiers learn how to anticipate and respond to tactical situations akin to those in Iraq and Afghanistan, such as encountering an improvised explosive device (IED), by moving in a shared, immersive, first-person environment.

Replicating the Operational Environment

Replicating the operational environment is essential to proper preparation. To ensure that FM Soldiers understand how they will perform their duties in the real world and can integrate their training, education, and cultural awareness, Financial Management School courses culminate with a field training exercise (FTX) at the Soldier Support Institute's Warrior Training Area (WTA). A state-of-the-art facility that mirrors the design of forward operating bases in Iraq and Afghanistan, the WTA engages students in full-spectrum operations and

allows instructors to evaluate the students' ability to survive and execute their mission.

Soldiers must prove their proficiency in the various systems and software of their profession, such as Eagle Cash Card, Paper Check Conversion, the Deployable Disbursing System, and the Commercial Accounts Processing System. In addition to FM-specific tasks, the FTX includes convoy operations, defense against IED attacks, and interaction with "local" citizens. The WTA also provides a setting for testing new financial management concepts and initiatives, such as the viability of using cell phones to conduct banking operations.

To strengthen financial management training further, the Financial Management School and the Soldier Support Institute, in conjunction with the Army Training and Doctrine Command, are exploring the possibility of expanding the WTA and making it the financial management equivalent of the National Training Center at Fort Irwin, California. All FM units would be required to complete a field exercise there before deploying, and the facility would be used for regular sustainment training as well.

The Financial Management School is committed to continual self-evaluation to ensure that everything it does better our Soldiers and keeps them prepared for all of the challenges they may face. The school will listen to and integrate into FM doctrine, training, and education the best ideas from junior Soldiers and senior civilian and military leaders alike. That input will be especially important as the school considers a redesign of its Captains' Career Course.

The Financial Management School also will seek to expand opportunities for FM Soldiers to gain experience and knowledge from the private sector and nonmilitary institutions of higher learning. Exposing students to fresh thinking and different perspectives has proven critical to helping them adapt to today's environment and will certainly remain so.

Ultimately, the dynamic and ambiguous state of modern warfare is unlikely to change any time soon, if ever. The frequency of decentralized operations undoubtedly will continue to increase, raising the responsibility bar for junior leaders; the types of missions that FM troops conduct will continue to morph and tread into the nontraditional; and the requirement for forward-deployed FM Soldiers within and beyond the wire will grow. No matter the situation, FM Soldiers will be ready to apply economic and fiscal power and give U.S. and coalition combatant commanders the decisive edge they need.

DR. DENNIS K. DAVIS IS THE DEPUTY COMMANDANT OF THE FINANCIAL MANAGEMENT SCHOOL.

Years	0	5	10	15	20	25
Rank	Lieutenant	Captain	Major	Lieutenant Colonel	Colonel	
Professional Military Education	BOLC	CCC FMTC	Intermediate Level Education	Senior Service College		
	Functional Category Designation					
Additional Training	<ul style="list-style-type: none"> Fiscal Law Account Payable Admin Course dL CERP dL PCAM Contracting Officer's Representative dL Disbursing Operations Course dL 	<ul style="list-style-type: none"> Resource Management Budget Course dL Joint Chiefs of Staff Internship Army Comptroller Course Resource Management Tactical Course dL ICAM Deployed Operations Resource Management Course Banking Officer Course Planning, Programming, Budgeting, and Execution System Support Operations Course 	<ul style="list-style-type: none"> Defense Comptrollership Program Training With Industry Executive Comptroller Course Army Congressional Fellowship Defense Financial Management Course Security Assistance Course Enhanced Defense Financial Management Training 	<ul style="list-style-type: none"> Defense Decision Support Course Cost Management Certificate Course Arroyo Center Fellowship Senior Resource Management Course Chief Financial Officer Academy 	<ul style="list-style-type: none"> Senior Resource Management Course Chief Financial Officer Academy Cost Management Certificate Course 	
Developmental and Utilization Assignments	Key Developmental Assignments					
	<ul style="list-style-type: none"> Disbursing Officer -FM Detachment -FM Company 	<ul style="list-style-type: none"> FM Detachment Commander Company Commander (01A) 	<ul style="list-style-type: none"> FM Company Commander Deputy Division G-8 Separate Brigade FMSupport Operations Officer Separate Brigade ESC G-8 Battalion Executive Officer Transition Team Member 	<ul style="list-style-type: none"> Division / 2-Star Command G-8 Battalion Command Deputy Director, FMC ASCC G-8 XO/Deputy & Budget/CONOPS Director ABO XO, PPBC XO, Deputy Chief Current Ops 	<ul style="list-style-type: none"> Corps G-8 3-Star Command G-8 Director, FMC ASCC/ACOM G-8 Brigade Command 	
	Broadening Experience					
	<ul style="list-style-type: none"> BNBDE Staff 	<ul style="list-style-type: none"> G-8 Budget/Program Analyst Service School Instructor Battalion/Brigade/Division/Corps/ASCC Staff Training/Combat Development Officer FM Company Executive Officer FM Company Disbursing Officer FMSupport Operations Plans Officer Banking Officer Special Troops Battalion Operations Officer Transition Team Member 	<ul style="list-style-type: none"> Service School Instructor Training/Combat Development Officer FMC/Corps/ASCC/ACOMDA/oint Staff ASCC/ACOM Budget Analyst 	<ul style="list-style-type: none"> Brigade Executive Officer (01A) ACOMOSD/DA/oint Staff Program Budget Officer FMC Disbursing Officer Deputy Corps G-8* ASCC/DA/COM/oint* Budget Officer FMS Director of Training FMCOMST Director 	<ul style="list-style-type: none"> ACOMOSD/DA/oint Staff Deputy Commander, Soldier Support Institute Director, Capabilities Dev & Integration Directorate, Soldier Support Institute National Guard Bureau/Office, Chief of Army Reserve Comptroller/G8 Director, PPBE Integration Commander, USAFMCOM Commandant, FMSchool 	
	Certification, Physical Fitness, Cultural Awareness Training, Language Proficiency Training, Graduate Degree, Post Graduate Degree					
Self Development	* Serves as KD assignment for Year Groups 1989-1994					As of 1 October 2010

Legend

AA/AS	= Associate of Arts/Science degree
ABO	= Army Budget Office
ACCP	= Army Correspondence Course Program
ACE	= American Council on Education
ACOM	= Army command
AIT	= Advanced individual training
ALC	= Advanced Leader Course
ASCC	= Army service component command
BA/BS	= Bachelor of Arts/Science degree
BCT	= Basic combat training
BOLC	= Basic Officer Leader Course
CCC	= Captains Career Course
CEDMS	= Corporate Electronic Document Management System
CERP	= Commander's Emergency Response Program
CMF	= Career management field
CONOPS	= Concept of operations
DA	= Department of the Army
dL	= Distance learning
DDS	= Defense Dissemination System
DTS	= Defense Travel System
EDA	= Electronic Document Access
FM	= Financial management
FMC	= Financial management center
FMTC	= Financial Management Tactical Course
GFEBs	= General Fund Enterprise Business System
IATS	= Integrated Army Travel System
ICAM	= Intermediate Cost Accounting and Management Course
KD	= Key and developmental
LIW	= Logistics Information Warehouse
NCO	= Noncommissioned officer
NCOES	= Noncommissioned Officer Education System
OSD	= Office of the Secretary of Defense
OST	= Operational support team
PCAM	= Principles of Cost Accounting and Management Course
PPBC	= Planning Program Budget Committee
PPBES	= Planning, Programming, Budgeting, and Execution System
RMBC	= Resource Management Budget Course
RMT	= Resource Management Tool
RMTc	= Resource Management Tactical Course
SLC	= Senior Leader Course
SMC	= Sergeants Major Course
SSD	= Self-structured development
USAFMCOM	= U.S. Army Financial Management Command
USASMA	= U.S. Army Sergeants Major Academy
XO	= Executive officer
WAWF	= Wide Area Work Flow
WLC	= Warrior Leader Course



NCO Professional Development Model

Title of Career Management Field: Financial Management

CMF Number: 36 (MOS 36B)

THE FOLLOWING ARE ONLY RECOMMENDATIONS: You will have to tailor your self development efforts to the availability of courses at your installation. Alternate methods of achieving CMF course recommendations are possible (examinations, correspondence courses, and ACE recommended credits). The position titles in your organization may differ from the below stated positions. Due to space constraints, all duty positions were not listed below. See DA Pamphlet 600 25 for position Career Progression Plans. See DA Pamphlet 611 21 for position data.



Operational Domain									
Ranks, Skill Levels (SLs), and Duty Assignments	Private — Specialist/Corporal SL 10		Sergeant SL 20 Team Leader		Staff Sergeant SL 30 Section Leader		Sergeant First Class SL 40 Detachment, Platoon Sergeant		Master Sergeant SL 50-80 First Sergeant
	Financial Management Technician (all FM disciplines)		Financial Management Analyst (all FM disciplines) Recruiter Drill Sergeant		Senior Financial Management Analyst (all FM disciplines) Recruiter, Drill Sergeant, AIT Instructor, Writer, Small Group Leader		Senior Financial Operations Manager, Deputy Finance Officer Senior AIT Instructor, Career Management NCO, Senior Small Group Leader, ACRC Adviser, Inspector General		Resource MGT NCO, Financial Management Advisor, Finance Operations Advisor, Senior Financial Management Advisor, Senior Financial Management Inspector Chief Career Management NCO, USASMA, Senior Trainer
Institutional Domain									
Institutional Training	BCT AIT		WLC		ALC		SLC		USASMC
Self-Development Domain									
Recommended NCOES-Related Courses	Prior to WLC: SSD Package 1		Prior to ALC: SSD Package 2		Prior to SLC: SSD Package 3		Prior to SMC: SSD Package 4		Post SMC: SSD Package 5
Recommended CMF-Related Courses and Activities FM Systems Training	Skill Level 10 1. Fiscal Law Course 2. FMAIT Accounts Payable, 3. Travel Admin/Entitlements 4. Accounts Payable Adm Course 5. ACCP: 805A D15, 805A D24		Skill Level 20 1. Disbursing Operations 2. Enhanced Defense Financial Manager's Training (EDFMT) 3. PPBES 4. ACCP: 805A M25 5. PCAM		Skill Level 30 1. Army Comptroller Course 2. RMBC, RMTC 3. ACCP: 805A D22, 805A D50, 805A D52 4. ICAM		Skill Level 40 1. Executive Comptroller Course 2. Contracting Officer's Representative Course (COR) 3. Senior Staff NCO Course		Skill Level 50 1. Defense Decision Support Course 2. Defense Financial Management Course 3. Senior Resource Manager's Course 4. Senior Staff NCO Course
	IATS, DTS, DDS, EDA, GFEBs				DDS, GFEBs, RMT, CEDMS, WAWF LIW, CASHLINK				
Recommended CMF-Related Certification or Degree Goal	AAJAS In: Accounting, Finance, Business Management, Economics, Marketing, Mathematics, Communications, Public Administration, Public Budgeting, Banking, Business Administration, Information Systems, Computer Science, Management Information Systems BY THE 12TH YEAR OF SERVICE ACCP - Army Correspondence Course Program (DA Pam 351-28)				BA/BS In: Accounting, Finance, Business Management, Economics, Marketing, Mathematics, Communications, Public Administration, Public Budgeting, Banking, Business Administration, Information Systems, Computer Science, Management Information Systems BY THE 16TH YEAR OF SERVICE				Cost Management Certificate Course Defense Comptrollership Program Master's Degree Recommended
	Professional Certification								
APPROVED BY: Commandant, U.S. Army Financial Management School DATE: 23 February 2010 UPDATED: 27 January 2010									

The Financial Management School has revised the career maps for financial management officers and noncommissioned officers. The maps combine education, training, experience, and self-development to produce Soldiers who are adaptable and think critically.

The Army Out of Balance

BY DR. ROMUALD A. STONE

To restore balance and enhance readiness, the Army must consider its institutional culture while developing a strategy to align its four key imperatives.

The Army continues to face challenges in its ability to sustain an all-volunteer force and remain the world's premier land-based fighting force. In its 10th year at war, the Army must be versatile enough to adapt to operate in a world of persistent conflict that is expected to continue for the foreseeable future. It is working to meet this challenge by building a versatile and agile campaign-capable expeditionary Army.¹ However, the cumulative effect of fighting two wars has put the Army out of balance.

The Army is out of balance because the logistics demand on our forces continues to exceed the sustainable supply. Senior Army leaders understand the magnitude of this challenge and have crafted a vision and strategy to meet current and emerging challenges. This strategy is articulated in each Army posture statement since 2008 and is grounded in four key imperatives: sustain, prepare, reset, and transform. (See sidebar below.)

The purpose of this article is not to debate the merits of this strategy but to highlight the need to integrate the four imperatives into a holistic and synergistic framework for restoring and sustaining balance.

The Chief of Staff of the Army, General George W. Casey, Jr., testified before a Senate subcommittee in February 2008 on the efforts required to transform the Army. In his remarks,

The Army's Four Imperatives

Sustain. To sustain the all-volunteer force, the focus is on recruitment and retention; care of Soldiers, families, and civilians; care for wounded warriors; and support for the families of fallen Soldiers.

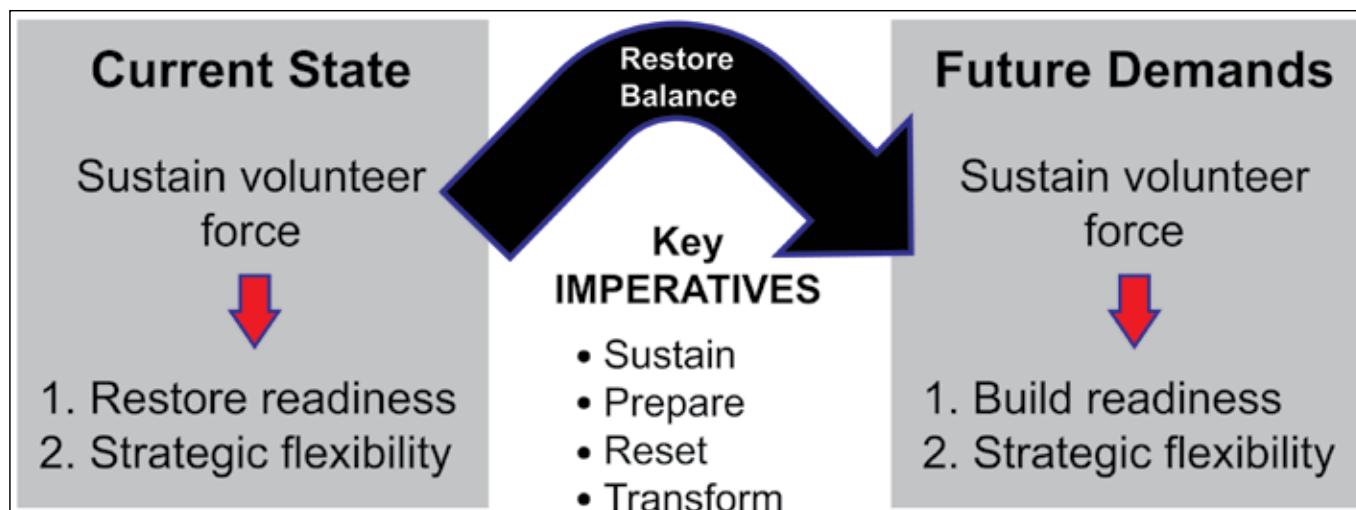
Prepare. To prepare our force, the focus is on readying Soldiers, units, and equipment to succeed in the current conflicts; adapting institutional, collective, and individual training to enable Soldiers to succeed in combat and prevail against adaptive and intelligent adversaries; ensuring Soldiers have the best available equipment both to protect themselves and to maintain a technological advantage over our adversaries; and continuing to focus on growing the Army, training, equipping, and better supporting the Army Force Generation process.

Reset. To prepare Soldiers, families, and units for future deployments and contingencies, the Army must reset the force to rebuild the readiness that has been consumed in operations. To reset our force, we are revitalizing Soldiers and families; repairing, replacing, and recapitalizing equipment; and retraining Soldiers.

Transform. To provide the combatant commanders dominant, strategically responsive forces capable of meeting diverse challenges across the entire spectrum of 21st century conflict, the Army must transform the force. Transforming includes adopting modular organizations, accelerating the delivery of advanced technologies, operationalizing the Reserve component, restationing forces, and transforming leader development.

(Source: 2009 Army Posture Statement)

¹ George W. Casey, "Opening Remarks Senate Appropriations Subcommittee on Defense," 27 February 2008, <<http://www.army.mil/speeches/2008/02/27/7825-opening-remarks-senate-appropriations-subcommittee-on-defense/>>, accessed on 28 September 2009.



This chart identifies the Army's current unbalanced state, the desired future state, and the key imperatives necessary to restore the Army to balance.

General Casey noted, “Our Soldiers, our families, our support systems, and our equipment are stressed by the demands of these repeated deployments. . . . We’re consuming our readiness as fast as we can build it.”²

The strategy to restore balance and enhance the Army’s readiness must consider the institutional culture that currently exists in the Army. The change literature is clear: Any strategic plan or change initiative is unlikely to be successful—that is, implemented and sustained—unless an appropriate organizational culture is in place to support the plan. If the Army is to succeed in restoring balance, senior Army leaders must clearly understand and effectively manage the cultural aspects of any transformation effort.

A review of the Army posture statements from 2005 to 2011 reveals a decline in the emphasis on institutional culture. In the 2005 and 2006 Army Posture Statements, the word “culture” is mentioned eight times each. In each case, the culture centers on the organization as an institutional culture. For example, the 2005 document says, “Like any large, complex organization committed to achieving transformational change, our efforts to change our culture will prove to be our true measure of success.”³

In subsequent posture statements, we see a marked decline in emphasis on institutional culture. In the 2007 statement, the word “culture” appears five times; however, three of those instances do not relate to organizational culture. Most disturbing is the fact that neither the 2009 nor the 2010 posture statements mention organizational culture. Those statements include an

addendum on Army culture that focuses more on cultural and individual awareness of our adversaries than the role institutional culture plays in executing any kind of transformation.

Why is this significant? If the Army truly hopes to achieve balance by 2012, it must not overlook the critical role institutional culture plays in this process.

What Is Institutional Culture?

Institutional culture is “a complex set of shared beliefs, guiding values, behavioral norms, and basic assumptions acquired over time that shape our thinking and behavior; they are part of the social fabric of the organization—its genetic code. As such, institutional culture drives the organization and guides the behavior of everyone in that organization—how they think, feel, and act. In other words, the culture forms a behavior template.”⁴ Tom Davis and Michael J. Landa succinctly capture the essence of culture in the following excerpt from their article:

The factors which define culture are in part internal, deriving from the unique character of the organization and, in part external, determined by the background and experiences managers and employees bring to the enterprise. Culture is a major determinant of productivity; it shapes organizational responses to external pressures; and suppresses or enhances the cooperative effort level of the workforce. Culture has a significant bottom-line effect on organizational effectiveness, profitability, and shareholder value.⁵

² Ibid.

³ Francis J. Harvey and Peter J. Schoomaker, “A Statement on the Posture of the United States Army 2005,” Office of the Chief of Staff, U.S. Army, Washington, D.C., 6 February 2005, p. 3.

⁴ Romuald A. Stone and Joyce Mason Davis, “Change Management: Implementation, Integration, and Maintenance of the HRIS,” in Michael J. Kavanagh and Mohan Thite, *Human Resource Information Systems: Basics, Applications, and Future Directions*, SAGE Publications Inc., Thousand Oaks, California, 2009, p.219.

⁵ Tom Davis and Michael J. Landa, “The Story of Mary: How ‘Organizational Culture’ Can Erode Bottom-Line Profitability,” *The Canadian Manager*, Vol. 25, No. 4, Winter 2000, p. 14.

Culture shapes how the Army “views the environment and adapts to meet current and future challenges.”⁶ Whenever there is an incongruity between the current culture and the goals of a change initiative, the culture always wins.⁷ For this reason, many change initiatives are ultimately unsuccessful because they lack sufficient cultural support to get people to embrace and implement the change.

Culture and Army Imperatives

The Army institutional culture should be the linchpin that holds the four imperatives together. Culture is the key to the Army’s strategy to achieve and sustain balance. Fundamentally, change is all about organizations and people doing things in new ways with regard to behaviors, organization, and processes. “When large, complex organizations pursue genuine transformational change, a true measure of their success is the ability of leaders to properly focus (and to reorient if needed) people’s attitudes, actions and beliefs—which guide behavior and establish the true operating culture of the organization.”⁸

The center of gravity for restoring balance resides in the Army institutional culture. The Army needs to place institutional culture back into the restoring balance equation. By paying careful attention to the Army’s values, beliefs, and behavior, we can create the necessary environment that supports achievement of the four imperatives to restore and sustain balance.

The Army is faced with a constantly changing global security landscape. Consequently, cultures that fit old needs must give way to cultures that fit the dynamics of current conflicts. The challenge perpetually facing the Army is not in defining or shaping its current culture but in constantly adapting its culture to the new realities of the 21st century. David Ulrich provides this useful metaphor to illuminate that important point:

Just as people’s closets and attics may be stuffed with mementos of sentimental value, organizations may preserve old cultures that feel cozy but become burdensome by failing to respond to change. Closets must be cleaned; attics must be seen to hold remnants of the past; and organizations must learn to let go of old cultures when new ones become necessary.⁹

Clearly, a wide variety of people and cultural issues play a huge role in any change effort or transformation. Culture can “not only stop a change effort dead in its tracks, it can also propel it to great heights. Wisdom

during organizational transformation is understanding the power of culture and how to get it to work for you instead of against you.”¹⁰

How do you get thousands of Soldiers and civilian employees suddenly to change their most basic assumptions about the Army? After all, the beliefs and attitudes that make up a culture filter into everything we do. And so, this is the challenge for Army leaders: Do not lose sight of the important role of culture in the transformation paradigm, and continue to shape and nurture an Army culture that is congruent with the realities of the changing environment. John P. Kotter emphasizes the importance of culture in change initiatives in this passage:

Change sticks only when it becomes “the way we do things around here,” when it seeps into the very bloodstream of the work unit or corporate body. Until new behaviors are rooted in social norms and shared values, they are always subject to degradation as soon as the pressures associated with a change effort are removed.¹¹

Research provides further evidence that culture is a key factor in an organization’s success and a significant limiting factor in managing change. Transformation leaders recognize that “significant strategic or structural realignment cannot occur if it is not supported by the organization’s values and behavioral norms.”¹²

This view is further supported by Rosabeth Moss Kanter, who suggests that managing change in an organization requires that people find their stability and security in the culture and direction of the organization.¹³ Therefore, understanding, analyzing, and effectively managing all aspects of the institution’s culture is paramount in supporting any change initiative.

Restoring Balance and Institutional Culture

In order to restore and sustain balance, the four imperatives and the institutional culture must be in alignment. This alignment is conveyed with arrows in the chart at right. All of the “arrows” should be pointing in the same direction—that is, aligned with one another.

Many organizational transformation efforts often fail to meet planned expectations. This may occur if the culture and any of the four imperatives are not fully aligned and interdependent. Any kind of misalignment can put the effort to rebalance the Army in jeopardy of not achieving the desired outcome. For example, if the

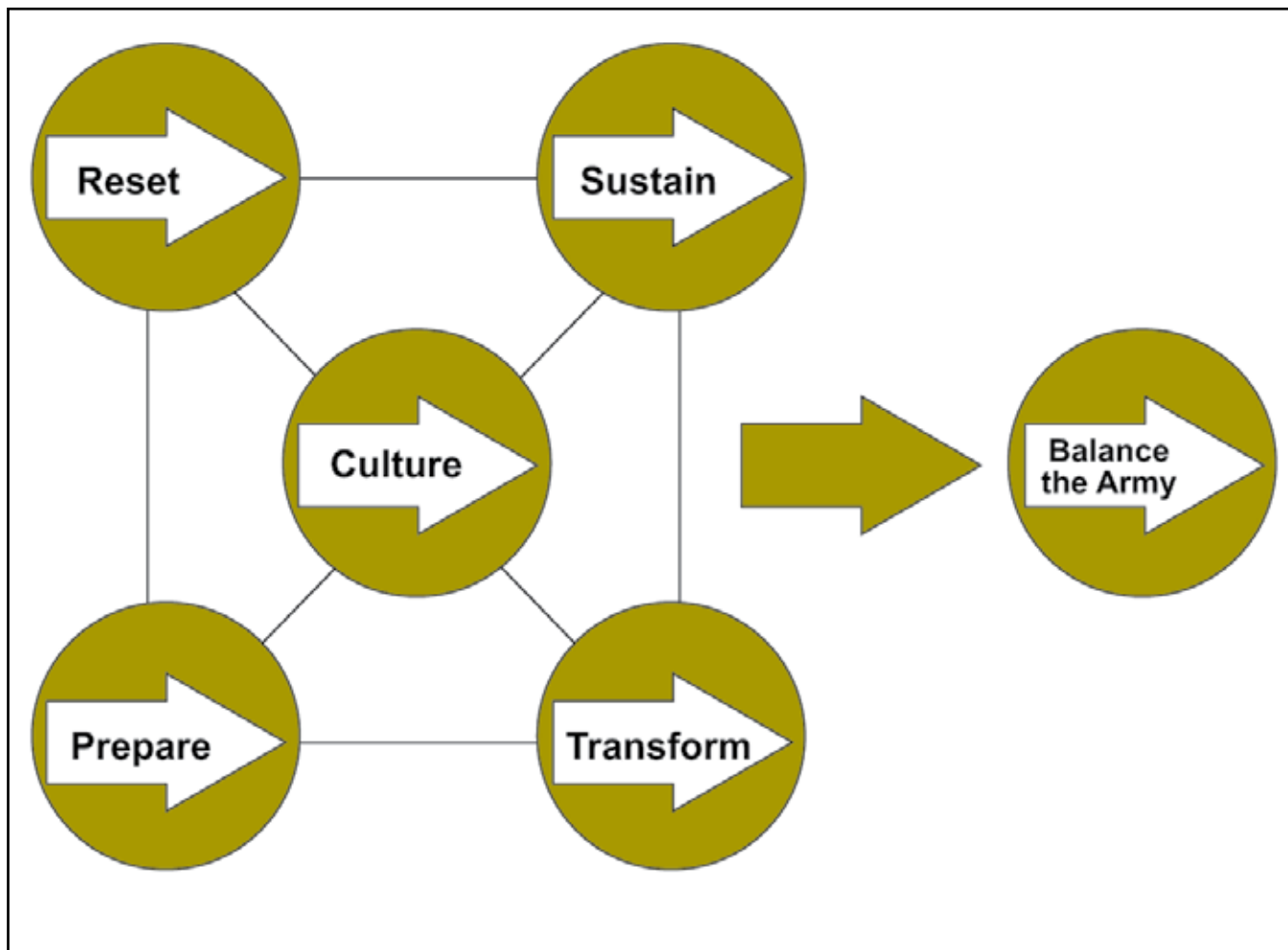
⁶ Michael B. Siegel, “Military culture and transformation,” *Joint Forces Quarterly*, Issue 49, 2d Quarter 2008, p. 103.

⁷ Daryl R. Conner, *Leading at the Edge of Chaos: How to Create the Nimble Organization*, John Wiley & Sons, Inc., New York, 1998, p. 207.

⁸ Mark D. Rocke and David P. Fitchitt, “Establishing Strategic Vectors: Charting a Path for Army Transformation,” The Institute of Land Warfare, Association of the U.S. Army, April 2007, <<http://www3.ausa.org/pdfdocs/special/may07.pdf>>, accessed on 28 September 2009.

⁹ Dave Ulrich, *Human Resource Champions*, Harvard Business School Press, Boston, 1996, pp. 177–178.

¹⁰ Larry E. Senn and John R. Childress, “Why Change Initiatives Fail: It’s the Culture Dummy!” Senn-Delaney Leadership Consulting Group, Inc., London, p. 1.



The four imperatives and the institutional culture need to be aligned in order to restore the Army's balance.

strategy for one imperative suffers because of resource constraints, the Army's plans for the remaining imperatives will be affected and so may the overall strategy to rebalance the Army.

Moreover, if the Army's behavioral norms remain unchanged, the misalignment itself is enough to lead to difficulties in successfully executing the change. These kinds of misalignments put a change effort in danger of not achieving the desired outcome. What is required is alignment—getting all the arrows to all point in the same direction in order to achieve the ultimate goal of restoring balance.

The four imperatives and Army culture are integral components of any transformation process. Culture, although difficult to measure precisely, is a real and very powerful force in how the Army achieves balance. To this end, the need to reposition culture in the

overall Army strategy is underscored. There is a direct and powerful link between the way people think and behave (how personnel work together) and the Army's overall performance. Future posture statements and action plans need to place renewed emphasis on institutional culture as an important element in the Army's paradigm for transformation so that we are better positioned to execute our strategy and goals in this important area.

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¹¹ John P. Kotter, *Leading Change*, Harvard Business School Press, Boston, 1996, p. 14.

¹² J. Kerr and J.W. Slocum, Jr., "Managing Corporate Culture Through Reward Systems," *Academy of Management Executive*, Vol. 19, No. 4, November 2005, p. 130.

¹³ Rosabeth Moss Kanter, *The Change Masters: Innovation and Entrepreneurship in the American Corporation*, Simon & Shuster, New York, 1983, p. 123.

Prospecting the Frontiers of Logistics Research

BY DR. CHRISTOPHER R. PAPARONE AND GEORGE L. TOPIC

The authors present 10 propositions for research by logisticians who constitute the wider community of “enterprise logistics.”

One of the most important aspects of professional education for “enterprise” logisticians is research. Research not only helps to develop the intellectual and problem-solving skills leaders need, but it also allows them to focus on key issues and make meaningful contributions to the community. Research projects offer students, practitioners, and faculties the opportunity to explore, compare, and critically assess available literature, consider contemporary issues from an enterprise perspective, and report conclusions to leaders, fellow practitioners, and the scholarly research community.

Our intent is to first describe our view of the “frontiers of enterprise logistics” and then present ideas that will constitute a useful collection of propositions for research. We hope that our offering will spur interest in these topics and produce some creative and useful research publications for the enterprise. We also wish to encourage discussion about logistics research and discover other ideas from members across the enterprise.

The Enterprise Logistics Frontier

We are careful to use the metaphor “frontier” when attempting to define “enterprise logistics” because we are not sure of the boundaries of this loosely coupled, interorganizational network of professional logisticians representing many institutions, cultures, and nations.

Reflecting on our Nation’s recent experience in responding to the earthquake in Haiti, we were encouraged by the vast array of international logistics responders that met the challenges of acquiring, storing, and distributing countless supplies and providing engineering and medical support and other vital logistics services to address the terrible suffering of so many. Many people, including some of our enterprise colleagues, may not be aware that the U.S. Department of Defense (DOD) logistics community sees its role in these circumstances as worthy of the term “core competency.” No longer are overseas disaster relief and support to domestic civil authorities considered ancillary DOD missions.

In this regard, we see our defense logistics community becoming part of a wider community of logisticians

(the “enterprise”) that, as a set of otherwise autonomous organizations, comes together to reach goals that none of us can reach separately. (We adapted this definition from Rupert F. Chisholm’s 1998 book, *Developing Network Organizations: Learning from Practice and Theory*.)

Considering this context, we believe that the enterprise logistics “frontier” offers a tremendous array of opportunities for logisticians—including students and faculty at military and civilian institutions and operational practitioners—to think about, explore, expand, refine, and assess ideas, issues, practices, processes, and innovations. Their research efforts can be powerful forces for the development of new knowledge, insights, and practices.

We should also point out that such research is not the exclusive purview of professional logisticians. Fresh eyes, eclectic ideas, alternative viewpoints, and broader perspectives come from many of the best papers we have seen in recent years—papers written by others not traditionally seen as enterprise members.

We also seek to address the various forms of inquiry that would constitute enterprise logistics research. Before we get to our recommended proposals, we want to first describe a typology for research that the enterprise might find useful. This typology relates to the types of tasks and degrees of uncertainty that the logistics enterprise faces as it conducts operations.

Research Rooted in an Organizational Task Typology

One way to look at the different types of research opportunities that are available is through the types of tasks that are undertaken by an enterprise. We should note that this categorization can be viewed as universal as opposed to simply applied within our field. As Charles Perrow describes in his 1986 seminal book, *Complex Organizations: A Critical Essay*, we see logistics tasks performed by the enterprise as falling into four types: routine, engineering, craftwork, and nonroutine, or “emergent,” tasks. Each type answers a different form of research question.

The first, routine tasks, involve organizational standing operating procedures, rules, processes, and centralized authorities that are learned, established, and

enforced to address discrete, recurrent problems and to get expected results. For logistics work, these would include set ordering procedures, managing intermodal transportation capabilities (both in-house and out-sourced), positioning capabilities at the point of need, and so on.

While these activities are relatively easy to efficiently control from a centralized organizational perspective, enterprise logistics should not expect to develop large-scale efficiencies by controlling routine work across the network. (Although, paradoxically, logisticians should be aware of each other's tightly-coupled routines in a collaborative, loosely coupled way.) The analogy may be how banks operate through their individual hierarchical controls yet can be part of interorganizational financial networks such as Visa or MasterCard.

Operations and systems analysis-style research, afforded by Lean and Six Sigma techniques and other scientific management models, would be appropriate for research in routine tasks. The principal question for this research would be how to increase efficiency.

Engineering tasks, the second type, address complicated, interdependent constructions of tightly coupled, integrated logistics systems, including the development of inventory management software; design and manufacturing of specialized transportation and service technologies to enable distribution; and expertise, equipment, and supplies under various conditions associated with such factors as demand history, weather, terrain, and security.

Imagine trying to integrate already complicated logistics systems inside each participating organization across the enterprise; this is likely untenable. Probably the best the enterprise can hope for these kinds of tasks is an interorganizational appreciation for the complexity of various systems and for finding opportunities to exchange ideas and improvise off each other while participating together in planning or exercise programs.

Yet scientific-oriented, systems-of-systems research and development and lessons learned research do benefit at least the internal organization of partners that make up the enterprise. The key question is how to best reengineer routine task linkages to work under a variety of conditions ahead of time.

Craftwork represents tasks of a third kind and includes tasks that change according to the situation at hand; hence, there is a loose-coupling even within a single organization, let alone a network of organizations. Craftwork (as the name implies) embodies a certain creative, artful, and aesthetic quality. Craftwork typically involves putting routine and engineered tasks together in new ways. This is what improvisational theorists call “bricolage”—putting old things together in new ad hoc ways.

When enterprise logisticians find themselves dealing with the unique conditions they face, their craftwork is customized, whether together (loosely coupled) or singly, through collaborative inquiry methods. Qualitative case-study research that seeks to document the rich, historic descriptions of these sorts of collective craftwork would help the enterprise immensely. This is a type of research that we believe is underrepresented in logistics literature, and our hope is to encourage both academicians and practitioners to help build a library of insights answering the question, how unique logistics challenges were approached using knowledge and capabilities at hand.

Nonroutine or emergent tasks, the fourth category, are similar to craftwork. However, the complexity of these tasks (they have a high degree of interactiveness and interconnectedness with each other and with environmental variables) makes performing them harder to control from the point of view of centralized management (centralized both internally in organizations and between organizations). Here, “network-centricity” (or decentralized self-organizing) becomes essential. The enterprise participants at various locations may operate together as improvisational jazz musicians would play (with neither sheet music orchestration or a conductor).

Here, logisticians focus on “action research” that involves experimenting with action *before* making decisions (and decisions are participative and always tentative). Admitting its ignorance (because no one knows), management focuses (with a humility that may be the subject of a logistics ethics research study in itself) on the quality of the network connections that can serve to promote near-real-time collaboration and increase sharing of action learning.

One could argue that documenting action research is similar to qualitative forms of research in craftwork. However, the focus is more on enterprise learning about the process of reframing, innovating, and improvising while in the field—not necessarily using what is known in new ways but inventing new knowledge as well. In action research associated with emergent tasks, the question is how to gain and report insights as practitioners reflect-in-action.

While any of these task types can offer ample fields for fertile research, our hope is that enterprise logistics researchers will in fact attempt to synthesize all facets of these tasks so they are able to diagnose and prescribe applicable and relevant forms of research. The types of tasks are of course not mutually exclusive, and in fact, elements of all of the task types probably can be found in any research project. It is a question of emphasis or focus that we hope to have researchers consider.

We also believe that the community should encourage a balance between the different types of tasks. It is our contention that, to date, the emphasis in logistics

research has tended more toward routine and engineering tasks that are measurable, and in many cases falsifiable, using the scientific method. While clearly valuable both as contributions to the literature and as a learning methodology, qualitative research on craftwork and emergent tasks offers great potential as well.

10 Propositions for Research

Although there is, or at least should be, a virtually limitless supply of topics for research, we wanted to address at least 10 that may help spur the effort. We considered framing the following list as a Letterman-style “Top Ten,” but we chose not to presume that these are in any priority order—the numbers are just there for reference. Our propositions can be considered as a whole or as places where any number of more focused theses can be drawn. In that regard, we offer the following challenges for the enterprise researcher from a DOD partner’s point of view.

1. Logistics efficiency is problematic because the enterprise will almost always take the form of a loosely coupled “ad hoc” organization—a dynamic, entrepreneurial, and improvisational organization that self-organizes based on common values (such as the need to sustain and protect innocent life).

2. Congress provides most defense funding to the three service departments. Defense logistics systems therefore may have to trade efficiencies associated with routine and engineering tasks while obfuscating centralized control across a full range of operations that include craftwork and emergent tasks.

3. Defense support to civil authorities and to overseas disaster relief requires DOD logistics to serve many unpredictable (craftwork and nonroutine) tasks required by victims, local authorities, state governors, other Federal agencies, or other nations. Thus, designing organizations for defense logistics to operate under conditions of ambiguity and uncertainty is problematic.

4. DOD “global force management” policies and processes are supposed to field and sustain the right joint capabilities at the right time for apportionment or allocation to the combatant commands. Demands for efficiency (getting the taxpayer the best value) and effectiveness (giving the operational commanders ready forces) often present competing or even conflicting values and tasks.

5. A global view of supply chain management (from obtaining raw materials worldwide to reforming transportation systems and logistics education) reveals a complicated web of potential failures for enterprise logistics.

6. National and nongovernmental lines of communication can be threatened (air, land, sea, natural disasters, and so forth) and forced to compete for inland resources (such as host-nation support, local

contractors, ports, and roads) with no prospect of centralized control.

7. The host area infrastructure and DOD organizational designs for joint land operations may be underdeveloped and unprepared to effectively and efficiently support enterprise reception, staging, and onward movement and provide decentralized logistics activities.

8. U.S. logistics organizations (to include U.S. and hired local contractors) play an important role in providing relief and creating or sustaining legitimate governance. Yet they typically are not systemically designed in an appropriate fashion, and logisticians are not prepared by service department or joint professional military education to assume this mission as “normal.”

9. Future concepts (white papers, joint operating concepts, integrating concepts, and so forth) are supposed to drive logistics organizations to change to meet the complexity and ambiguity of future operational contexts. Yet history demonstrates we have been unable to forecast craftwork and nonroutine forms of work very effectively, if at all.

10. Logistics history is important but underemphasized in the enterprise (in DOD’s case, service and joint professional military education). History is important not because it provides templates for the future, but principally because well-interpreted history teaches us how each operational context is unique and calls for critical and creative thinking, especially when dealing with craftwork and complex, non-routine tasks.

We recognize that these proposals may be incomplete and lack prioritization in the greater enterprise, yet we feel compelled to express our views and share them with others who study and operate in the frontiers of enterprise logistics. Our hope is to be seen as collegial so that we may at least begin conversations among our fellow enterprise logisticians about these sorts of proposals and perhaps address research in other terms. We invite and encourage critical reviews of both our construction of enterprise logistics and our task typology, as well as our 10 research proposals.

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Army Changes Facility Standards to Improve Energy Security

As of October 2010, the Army changed its policies on energy efficiency for buildings in an effort to become a “net zero” energy consumer by 2030. The policy changes aim to provide the Army with energy security by ultimately ensuring that the service can continue its mission without relying on the civilian power grid.

Among the changes are revisions to the Memorandum for Sustainable Design and Development Policy Update (Environmental and Energy Performance), from the Assistant Secretary of the Army for Installations, Energy, and Environment. The revisions set planning, programming, budgeting, design, and building requirements that reduce energy consumption for facilities by incorporating sustainable design and development principles based on guidance from the American Society of Heating, Refrigeration, and Air-Conditioning Engineers.

Some of the strategies the Army will use to reduce energy and water consumption, optimize

energy efficiencies and performance, and reduce negative impacts on the environment include cool roofs, solar water heating, and storm water management. The Army Corps of Engineers’ preliminary analysis of the new construction standards indicates that the Army should see an energy saving of up to 45 percent.

The Army has also set goals to replace all incandescent lighting on Army installations within the next 5 years and to purchase only high-efficiency light bulbs for its owned and leased facilities and structures.

Though timelines have not yet been set, the Army is also considering plans for “net zero” water and waste consumption.

Army Contracting Command Renames Major Contracting Centers by Location

On 19 January, the Army Contracting Command renamed its seven major contracting centers to reflect their geographic locations. The centers’ names now are—

Army Reserve Unit Fielded First Palletized Load System A1 Trucks

The 730th Transportation Company, 311th Sustainment Command (Expeditionary), Army Reserve, received the first palletized load system A1 trucks fielded to the Army during a first-unit-equipped ceremony on 4 February at the Joint Forces Training Base in Los Alamitos, California. The 730th will receive 60 of these trucks to support local and long-distance line-haul operations. The new vehicles feature increased survivability and mobility and improved performance compared to their predecessors. In this photo, Soldiers demonstrate how the truck can load and unload equipment more quickly than previous truck variants. (Photo by Department of the Army)



- ❑ Army Contracting Command-National Capital Region, formerly National Capital Region Contracting Center, at Alexandria, Virginia.
- ❑ Army Contracting Command-Picatinny, formerly JM&L [Joint Munitions and Lethality] Contracting Center, at Picatinny Arsenal, New Jersey.
- ❑ Army Contracting Command-Aberdeen Proving Ground (C4ISR) [Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance], formerly CECOM [Army Communications-Electronics Command] Contracting Center, at Aberdeen Proving Ground, Maryland.
- ❑ Army Contracting Command-Aberdeen Proving Ground (SCRT) [Soldier, Chemical, Research, and Test], formerly RDECOM [Research, Development and Engineering Command] Contracting Center, at Aberdeen Proving Ground.
- ❑ Army Contracting Command-Redstone, formerly AMCOM [Army Aviation and Missile Command] Contracting Center, at Redstone Arsenal, Alabama.
- ❑ Army Contracting Command-Warren, formerly

TACOM Contracting Center, at Warren, Michigan.

- ❑ Army Contracting Command-Rock Island, formerly Rock Island Contracting Center, at Rock Island Arsenal, Illinois.

The contracting centers provide acquisition, contracting, business advisory, production support, and depot-level maintenance services in acquiring, fielding, and sustaining Army weapon systems, services, and Soldier support.

Largest Fuel Shipment of Operation Enduring Freedom Delivered to Remote Base in Afghanistan

Over 2 days in January, three C-17 Globemaster III aircraft airdropped a total of 20,000 gallons of JP8 fuel to the support battalion of Task Force Currahee, 101st Airborne Division, near Forward Operating Base Waza Khwa in the Paktikah province of Afghanistan. The mission provided the remote base with a 30-day supply of fuel—the largest delivery to a remote location during OEF.

Each plane dropped 40 bundles, for a total of 120, with each pallet containing four 55-gallon drums of

RECENTLY PUBLISHED

Army Training and Doctrine Command Pamphlet (TRADOC Pam) 525–8–2, The U.S. Army Learning Concept For 2015 (ALC 2015), published in January 2011, sets a vision for how the Army will train and educate Soldiers and leaders in individual knowledge, skills, attributes, and abilities to execute full-spectrum operations in an era of persistent conflict. ALC 2015 suggests a set of capabilities that guides the development of an enhanced learning environment centered on the learner and on providing access to relevant learning content throughout Soldiers' careers.

In a table spanning over 6 pages, ALC 2015 proposes that the TRADOC Campaign Plan include a number of training-related actions, including—

- ❑ Converting most classroom experiences into collaborative problem-solving events led by facilitators who engage learners to think about and understand the relevance and context of what they learn.
- ❑ Changing instructor and facilitator selection and assignment processes to increase quality and attract the best candidates through a rigorous selection process.
- ❑ Establishing a range of capabilities that support the learner-centric 2015 learning environment.

Suggested capabilities to support the 2015 learning environment include a blended learning approach that incorporates virtual and constructive simulations,

gaming technology, or other technology-delivered instruction and a plan to put mobile digital devices into the hands of all Soldiers no later than 2013.

TRADOC Pam 525–8–3, The U.S. Army Training Concept 2012–2020, published in January 2011, describes the total Army organizational training requirements and capabilities needed to generate and sustain units trained in full-spectrum operations to succeed in the operational environment in conditions of uncertainty over extended periods. The concept poses and answers these questions:

- ❑ How must the Army change its unit construct to enable commanders and leaders to effectively and efficiently train adaptive units to meet the Army Force Generation (ARFORGEN) readiness objective to conduct full-spectrum operations in the future operational environment from 2012 to 2020?
- ❑ What capabilities should the Army provide commanders and leaders to enable them to execute ARFORGEN-based training plans needed to generate and sustain full-spectrum operations-trained units?

The concept also articulates how the Army is synchronizing its efforts in the operational and institutional domains to create this training environment.



Soldiers from Task Force Currahee recover fuel delivered by air to Forward Operating Base Waza Khwa in Afghanistan. (Photo by MSgt. Adrian Cadiz, U.S. Air Forces Central Public Affairs)

fuel. As the bundles landed, Soldiers from Task Force Currahee collected and stored the pallets to prepare for the next drop.

According to Lieutenant Colonel Stacy Maxey, the air mobility liaison officer for Combined Joint Task Force 101, the mission was a perfect example of how joint operations should work. “From the Army riggers who palletized the JP8, to aerial porters and load masters who put the pallets on the plane, to the C-17 crew that delivers the supplies, right down to the Army contingent here who recovered the supplies—this was a total force mission proving we are all in.”

The fuel was delivered while the base had only 11 days worth of fuel left on hand, and air delivery is the only method of supply available to the base. Because of a lack of roadway infrastructure and security, convoys have not resupplied the base in 3 years.

Fuel shortages to remote operating bases such as this one only make it harder to improve security. “Without this resupply, we can’t run our vehicles, we have no (security force) patrols, we can’t communicate,” said Lieutenant Colonel Davis Preston, commander of the support battalion. “Fuel is critical to our survival, and these airdrops make it possible to sustain the mission.”

Army Fiscal Year 2012 Budget Request Reflects Decline in Contingency Operations Spending

President Barack Obama’s proposed budget for the Army was submitted to Congress on 14 February. The fiscal year (FY) 2012 budget request totals \$215.974 billion, a \$29.552 billion, or 12 percent, decrease from the FY 2011 request. Close to one-third of the funding, 32.9 percent, is requested for overseas contingency operations (OCO). The President is asking \$71.107 billion for OCO, a decrease of \$30.987 billion, or 30.35

percent, from the FY 2011 OCO request. The President is also asking for a \$144.867 billion base budget, an increase of \$1.435 billion, or 1 percent, over the FY 2011 base request.

Spending requests by major category, including OCO, are—

- Military personnel: \$63.580 billion (a decrease of 3.33 percent from the FY 2011 request).
 - Operation and maintenance: \$89.793 billion (15.97 percent less than the FY 2011 request).
 - Procurement: \$24.343 billion (down 19.58 percent).
 - Research, development, test, and evaluation: \$9.693 billion (a decrease of 7.54 percent).
 - Military construction: \$4.290 billion (down 30.82 percent).
 - Family housing: \$682 million (up 11.62 percent).
 - Joint Improvised Explosive Device Defeat Fund: \$2.799 billion (down 19.24 percent).
 - Chemical demilitarization: \$1.63 billion (up 2.39 percent).
 - Afghanistan Security Forces Fund: \$12.8 billion (up 10.16 percent).
 - Iraq Security Forces Fund: \$0 (down 100 percent from the FY 2011 request of \$2 billion).
- In FY 2012, the procurement request includes funding for the acquisition of—
- 75 UH-60 Black Hawk helicopters for \$1.597 billion.
 - 48 CH-47 Chinook helicopters, including 33 new and 15 rebuilt helicopters, for \$1.36 billion.
 - 10,053 parachutes for \$68.392 million, including 8,959 advanced tactical parachute systems, 144 joint precision airdrop systems, and 950 advanced emergency bailout parachutes.
 - 18 systems from the mine-protection vehicle family, including 5 Panther medium mine-protected vehicles and 13 vehicle-mounted mine-detection systems, for \$56.671 million.
 - \$293.7 million to recapitalize mine-resistant ambush-protected vehicles and route-clearance vehicles.
 - 11,607 in the family of heavy tactical vehicles, including 115 heavy expanded-mobility tactical trucks (HEMTTs), 1,062 HEMTT light equipment transporters, 154 heavy equipment transport systems, 2 palletized load system trucks, 2,095 container roll-in/out platforms, 548 enhanced container handling units, and 7,785 movement tracking systems, totaling \$674.508 million.
 - 1,503 trucks and 950 trailers for the family of medium tactical vehicles for \$444.03 million.
 - Recapitalization of 1,362 up-armored high-mobility multipurpose wheeled vehicles for \$161.631 million.
 - 494 petroleum and water distribution systems for \$75.457 million.
 - 3 Force Provider modules with 4 power generation kits, 6 cold-weather kits, and 8 Force Provider Expeditionary Tricon sets for \$68 million.

- ❑ 226 field-feeding systems, including 160 multi-temperature refrigerated container systems and 66 assault kitchens, for \$26.860 million.
- ❑ 15 mobile integrated remains collection systems for \$7.384 million.
- ❑ 444 mobile maintenance equipment systems, including 404 shop-equipment contact maintenance systems, 40 hydraulic-system test and repair units, and the fielding of standard automotive tool sets to the Army National Guard, for \$41.701 million.
- ❑ Two commercial-off-the-shelf fixed-wing aircraft with associated military modifications for \$14.572 million to support operational support airlift, special electronic mission aircraft, special mission aircraft (utility), and training requirements.
- ❑ One joint high-speed vessel (JHSV) for \$223.845 million. The JHSV provides intratheater lift of personnel, supplies, and equipment to improved ports and other discharge sites.

The Army has also requested \$10.080 million to support the provisioning of industrial facilities (PIF) and layaway of industrial facilities (LIF) programs. PIF

supports the upgrade and replacement of Government-owned production equipment that is technically or economically obsolete. LIF preserves the Army's ability to respond when increased production is needed while keeping active production costs down.

Research, Development and Engineering Command Deploys Task Force to Afghanistan

The Army Research, Development and Engineering Command (RDECOM) deployed Task Force Warrior to Afghanistan in January to be the Army's command center for science and technology for Operation Enduring Freedom. The mission of the task force is to provide timely solutions and answers to technical problems coming from Soldiers in theater.

Task Force Warrior is composed of 32 military and civilian personnel, including engineers, scientists, shop foremen, machinists, and administrative and supply staff, from 8 research centers from across the United States. The RDECOM personnel are based at Bagram Airfield in Afghanistan and during their 6-month

PROFESSIONAL DEVELOPMENT

Unit Supply Specialists Use Mobile Applications for Training

A pilot program at the Army Quartermaster School is supplying advanced students of the Unit Supply Specialist (92Y) course with mobile devices and tailored applications that let them continue learning outside of the classroom and access lessons when unforeseen circumstances keep them from the classroom.

The program, initiated in July 2010, is now in its second phase. The program is slated to be completed in July. It will allow the Army Combined Arms Support Command (CASCOM) to evaluate if mobile applications can be used more extensively for training. According to Matthew MacLaughlin, Jr., chief of the Technology Integration Branch at CASCOM, the mobile curriculum for the 92Y course includes lesson plans, checks on learning, manuals, and a podcast library consisting of information on the small-arms inventory that students will encounter.

A similar program is underway at the Army Ordnance School, where students in the Explosive Ordnance Course are using similar devices.

In addition to supporting the Army Learning Concept 2015 by making courses less dependent on location, the mobile devices also could substantially cut paper reproduction costs by using digital media for classroom materials.



Unit supply specialist students at the Army Quartermaster School are engaged in a pilot program that gives them access to iPhone-based course material. (Photo by Keith Debois, CASCOM and SCoE Public Affairs)

deployment are responsible for establishing the Field Assistance in Science and Technology Center.

The center will help Soldiers focus requirements so that RDECOM's technical staff can better understand the specific needs of Soldiers on the ground.

Philip A. Connelly Award Winners Announced

The Department of the Army G-4 and the Chairman of the Board, International Food Service Executives Association, jointly announced the winners of the 2011 Philip A. Connelly Awards on 15 December.

The annual program recognizes excellence in Army food service through the evaluation of food preparation, taste, nutrition, service, and sanitation practices. The 2011 Philip A. Connelly Award winners are as follows:

- ❑ Small garrison category: Camp Zama Dining Facility, Camp Zama, Japan.
 - ❑ Large garrison category: Freedom Inn Dining Facility, Fort Meade, Maryland.
 - ❑ Active Army field kitchen category: 126th Transportation Company, 330th Transportation Battalion, Fort Bragg, North Carolina.
 - ❑ Army Reserve field kitchen category: 824th Quartermaster Company (Heavy Airdrop Systems), 362d Quartermaster Battalion, Fort Bragg, North Carolina.
 - ❑ Army National Guard field kitchen category: Support Company, 216th Engineer Battalion, Cincinnati, Ohio.
- In March, two representatives from each winning and runner-up team also received 1 week of culinary arts training at the Robert Morris University Institute of Culinary Arts in Chicago, Illinois.

Writing for *Army Sustainment*

If you are interested in submitting an article to *Army Sustainment*, here are a few suggestions. Before you begin writing, review a past issue of *Army Sustainment*; it will be your best guide. Then follow these rules:

- ❑ Keep your writing simple and straightforward (try reading it back to yourself or to a colleague).
- ❑ Attribute all quotes.
- ❑ Identify all acronyms, technical terms, and publications (for example, Field Manual [FM] 4-0, Sustainment).
- ❑ Do not assume that those reading your article are necessarily Soldiers or that they have background knowledge of your subject; *Army Sustainment*'s readership is broad.
- ❑ Submissions should generally be between 800 and 4,000 words. (The word limit does not apply to Spectrum articles. Spectrum is a department of *Army Sustainment* intended to present researched, referenced articles typical of a scholarly journal.)

Instructions for Submitting an Article

- ❑ *Army Sustainment* publishes only original articles, so please do not send your article to other publications.
- ❑ Obtain official clearance for open publication from your public affairs office before submitting your article to *Army Sustainment*. Include the clearance statement from the public affairs office with your submission. Exceptions to the requirement for public affairs clearance include historical articles and those that reflect a personal opinion or contain a personal suggestion.
- ❑ Submit the article as a simple Microsoft Word document—not in layout format. We will determine layout for publication.
- ❑ Send photos and charts as separate documents. Make sure that all graphics can be opened for editing by the *Army Sustainment* staff.
- ❑ Send photos as .jpg or .tif files—at least 300 dpi. Photos may be in color or black and white. Photos embedded in Word or PowerPoint will not be used.
- ❑ Include a description of each photo submitted and acronym definitions for charts.
- ❑ Submit your article by email to leeelog@conus.army.mil or by mail to—

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If you mail your article, please include a copy on CD if possible.

If you have questions about these requirements, please contact us at leeelog@conus.army.mil or (804) 765-4761 or DSN 539-4761. We look forward to hearing from you.

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